S. Hrg. 99-804, Pt. 3

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

HEARINGS

BEFORE THE

COMMITTEE ON ARMED SERVICES
UNITED STATES SENATE

NINETY-NINTH CONGRESS

SECOND SESSION

ON

S. 2199

TO AUTHORIZE APPROPRIATIONS FOR FISCAL YEAR 1987 FOR THE ARMED FORCES FOR PROCUREMENT, FOR RESEARCH, DEVELOPMENT, TEST, AND EVALUATION, FOR OPERATION AND MAINTENANCE, AND FOR WORKING CAPITAL FUNDS, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

PART 3

ARMY PROGRAMS
NAVY-MARINE CORPS PROGRAMS
AIR FORCE PROGRAMS

APRIL 15, 16, 17, 1986

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DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

TUESDAY, APRIL 15, 1986

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

ARMY PROGRAMS

The committee met in open session pursuant to notice, at 9 a.m., in room SR-222, Russell Senate Office Building, Senator Strom Thurmond, presiding.

Present: Senators Thurmond, Warner, Humphrey, Wilson, Gramm, Exon, Bingaman, and Dixon.

Staff present: Patrick A. Tucker, general counsel; Robert E. Bayer, John J. Hamre, Patricia L. Watson, David S. Lyles, Carl M. Smith, and Daniel J. Wildfong, professional staff members; and Inga B. Schoonover, staff assistant.

Also present: Romie L. Brownlee, assistant to Senator Warner; Dale F. Gerry, assistant to Senator Cohen; Allan W. Cameron, assistant to Senator Denton; Alan Ptak, assistant to Senator Gramm; Francis J. Sullivan, assistant to Senator Stennis; Jeffrey B. Subko, assistant to Senator Exon; John B. Keeley, assistant to Senator Levin; Charles C. Smith, assistant to Senator Dixon; and Milton D. Beach, assistant to Senator Glenn.

OPENING STATEMENT BY SENATOR STROM THURMOND, PRESIDING

Senator THURMOND. The committee will come to order.

The committee meets this morning to receive testimony on Army posture for fiscal year 1987. We are pleased to welcome Hon. John O. Marsh, Jr., Secretary of the Army; and Gen. John A. Wickham, Jr., Chief of Staff, U.S. Army.

In reviewing the President's proposed budget, I note with some concern that in four of the five Army procurement accounts the amounts requested in 1987 are actually lower than the amounts appropriated for fiscal year 1986.

I am advised that the 1987 requested levels are approximately 5 percent below the 1986 appropriated levels. This means that the task of modernizing our Army—a task which is far from complete—will be further delayed. Programs will have to be stretched out, which will drive unit costs higher and increase the overall cost of defense. And making matters even worse, the Senate Budget

Committee has recommended that we reduce the President's 1987 Defense budget by more than $25 billion.

Personally, I think this is a highly irresponsible way to go about performing our duty to provide for the Nation's defense.

We have come a long way toward modernizing our Army, but we still have a long way to go. Now is not the time to turn back. Regrettably, there are still too many Members of Congress who believe that defense can be bought cheaply, without requiring any sacrifices. I wish that were true.

You gentlemen have the task this morning of explaining to us how you are going to maintain and equip an ever-improving Army despite an ever-diminishing budget. We are pleased to welcome you, and look forward to your testimony.

Senator Dixon, do you have an opening statement?

Senator DIXON. Thank you, Mr. Chairman.

We are here today to receive testimony from Hon. John O. Marsh, Secretary of the Army, and Gen. John A. Wickham, Jr., Chief of Staff of the Army, on the views and posture of the Army prior to our committee's consideration of the fiscal year 1987 Defense authorization bill.

As the ranking member of the Preparedness Subcommittee, I have been attending hearings on the readiness situation in each of the services. To be very frank, Mr. Chairman, I feel we are going backward in the areas of ammunition supply and spare parts.

Just last week, the Army agreed with me that its 5-year plan to purchase ammunition has been cut so badly by the Office of the Secretary of Defense that it will not meet the 1985 level of ammunition purchase by 1992.

I will be addressing the question of our military's future readiness this afternoon with Deputy Secretary of Defense Taft at the Preparedness Subcommittee hearing. But I think it is time that this committee look very carefully at buying new tanks, planes, and ships if we do not have spare parts to keep them running, nor the ammunition to keep them fighting.

Thank you, Mr. Chairman.

Senator THURMOND. Thank you, Senator Dixon.

Mr. Marsh, we look forward to your testimony.

STATEMENT OF HON. JOHN O. MARSH, JR., SECRETARY OF THE ARMY

Mr. MARSH. Mr. Chairman, if I could, I wish to file my statement for the record and make an oral presentation.

Senator THURMOND. That will be fine.

Members will be coming in. All but five have indicated they will attend the meeting sometime this morning.

Now, I have to open the Senate at 9:15 if I can get somebody to take over for a few minutes. I will preside and then I will come back.

Mr. Marsh, I want to compliment you for the excellent job you are doing as Secretary of the Army.

You may proceed.

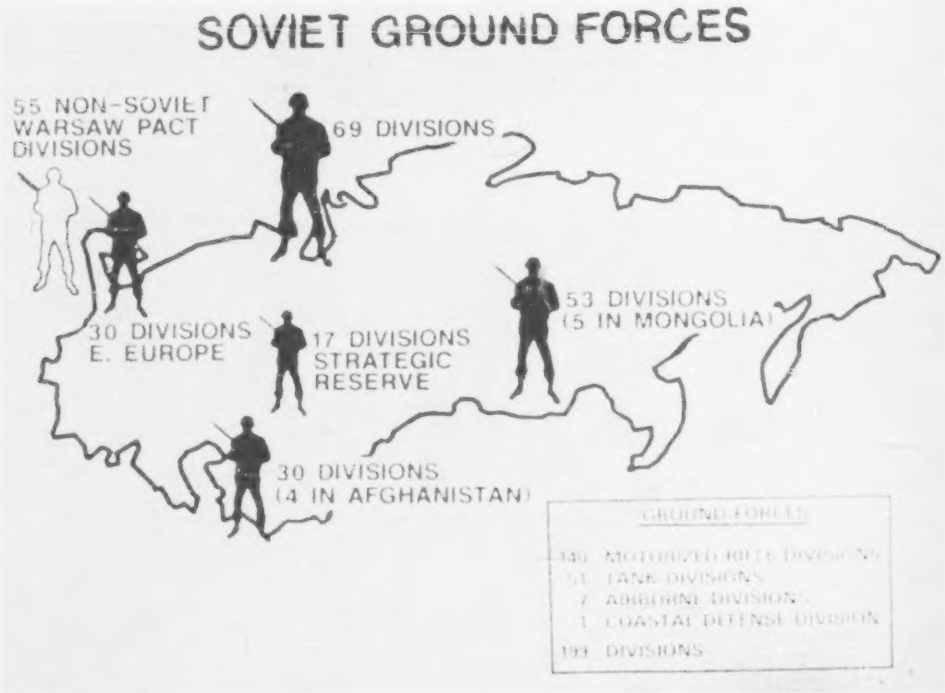
Mr. MARSH. Thank you, Mr. Chairman.

I appreciate very much the comments that you made, not just in reference to my service, but your summary of the situation in which we find ourselves involving the financing of an adequate defense program. The events of yesterday to which you referred highlight the precarious times in which we live.

If you look at the bottom line of this, you still see that the major problem is the Soviet Union, their tremendous capabilities of military power.

[Slide presentation. Numerous slides deleted.]

This is a picture from Red Square. If we look at the Soviet Army, we find it has 199 divisions.


SOVIET GROUND FORCES
55 NON-SOVIET WARSAW PACT DIVISIONS
69 DIVISIONS
30 DIVISIONS E. EUROPE
17 DIVISIONS STRATEGIC RESERVE
53 DIVISIONS (5 IN MONGOLIA)
30 DIVISIONS (4 IN AFGHANISTAN)
GROUND FORCES
140 MOTORIZED RIFLE DIVISIONS
51 TANK DIVISIONS
7 AIRBORNE DIVISIONS
1 COASTAL DEFENSE DIVISION
199 DIVISIONS

I testified last year it was 194, and this is an increase of 5. You find dispersion of their units, 40 divisions are class A. Most of those are in the NATO area. Their equipment is not antiquated. They use modern technology.

Shown on this slide is a picture of the SA-6. Here on this slide is a picture of the SA-7, surface-to-surface missile, with 1,500 in inventory. We estimate there are in excess of 300 to 375 of these facing the NATO alliance.

Armor is the backbone of the Soviet force. I will now show the T-64, with over 13,000 produced. This tank has never been exported outside the Soviet Army. Then we have another modern tank, the T-72, with 18,000 produced, of which 3,300 have been moved in the export sales program. Both of these vehicles have a 125 millimeter cannon or gun on it.

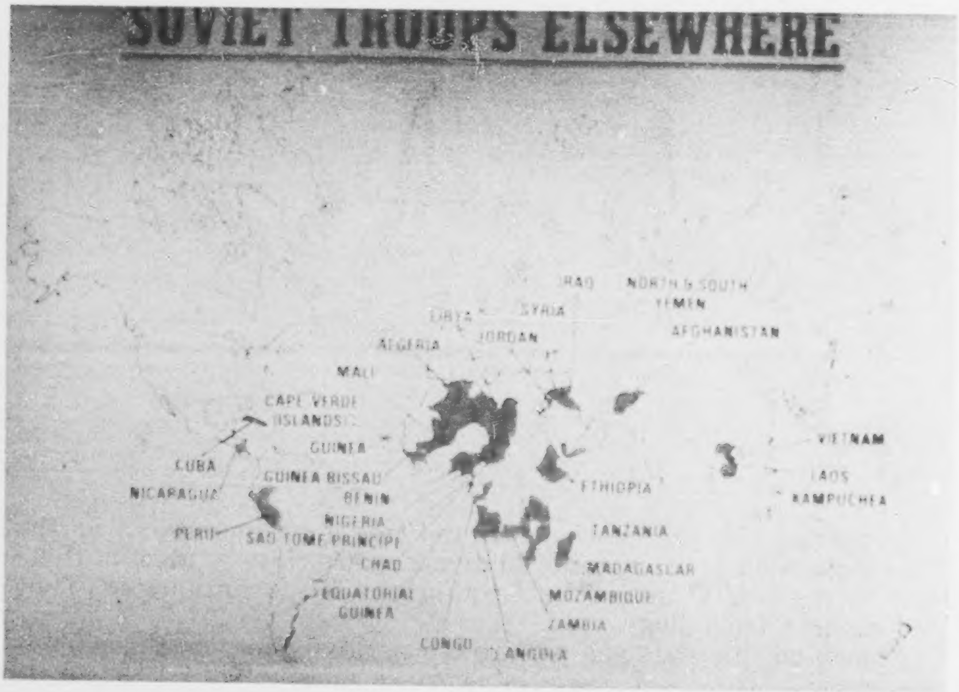
This is a T-80 tank. They have not produced too many of these, about 3,500. None thus far have been found outside the Soviet Union's forces.

They have produced over 60,000 personnel carriers. This is not the most modern, but it is a modern type version. This has a 73-millimeter cannon on it, and it carries 11 including 3 crewmen and 8 passengers. It also has a rail for launching an antitank missile. Of the 60,000 in Soviet inventory, we estimate there are 30,000 facing NATO.

The Soviets have seven airborne divisions capable of projecting power to various regions of the world.

They have not neglected their division air defense. This is the ZSU-23-4, a more modern version than the earlier version of this weapon used in North Vietnam, and proven as a very effective antiaircraft gun. This is a more modern, highly mobile, mechanized-type of vehicle.

The HIND helicopter is one of the most heavily armed helicopters in the world. You will find them in 20 regiments, 40 per regiment. We estimate probably somewhere around 600 are facing NATO. Interestingly, you will find 18 of those in Cuba and you will find six of those in Nicaragua.



Now, the Soviets do not limit their military expansion to their own area, but we see that they are represented in many areas of the world. Our intelligence estimates 20,000 Soviet military personnel are involved in the foreign military sales program in 30 countries of the world.

AFGHANISTAN AND NICARAGUA

They also, in addition to foreign military sales, are engaged in seeking to crush Afghanistan, in a war which has been dragging on for a number of years.

Likewise, in our own hemisphere you will find the largest intelligence station operating in Lourdes, Cuba, not far from Havana, manned by Soviet military and civilian technicians.

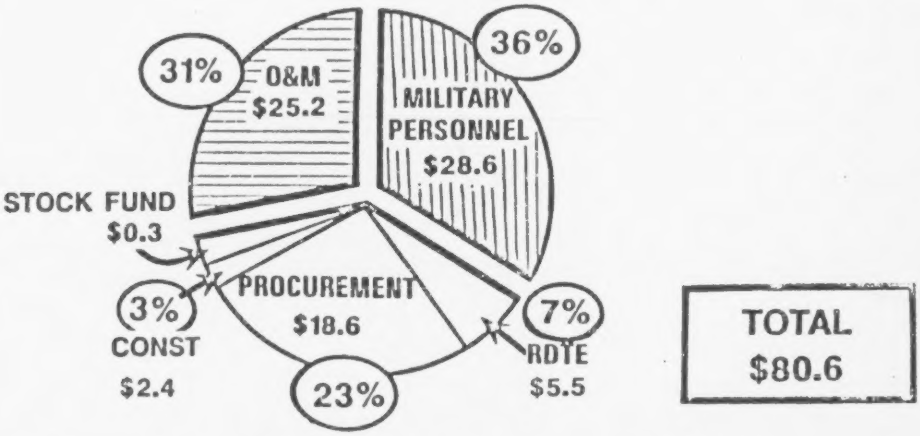
Introduction of armor has now been observed in Nicaragua. These are Soviet T-54, and T-55 tanks. Better than 100 of those are now in the Nicaragua inventory as they build the largest army in Central America.

Also in Nicaragua, in addition to the HIND, you will find the MI-8 helicopter of the Soviet Union carrying 24 passengers, and a crew of 3, a very capable and effective aircraft.

Now, the heart of our military system is the American soldier. It is the heart of the military budget for the Army and General Wickham will tell you something about these young men who are coming in the Army at the rate of 91 percent high school graduates, and are highly motivated and very capable. That is fortunate for us and the world in which we live.

FY 87 TOA

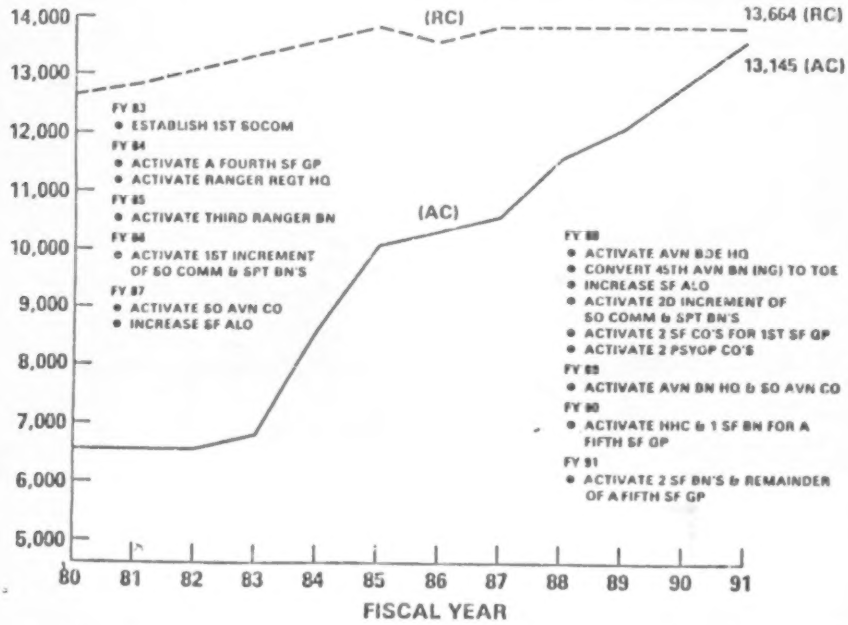
(TOA $ IN BILLIONS)



If you were to look at our budget request of $80.6 billion, we are certainly behind the projection lines we had several years ago. But, if you look at that budget, you will see we are placing an enormous emphasis here on our military personnel, 36 percent will go there (indicating), 7 percent in research and development, 23 percent in procurement, 3 percent in military construction, 31 percent in operation and maintenance; 13 percent of this Army budget, $10.3 billion is going in the Reserve Component.

Notwithstanding the emphasis that is occurring on light infantry forces, we are keeping as the centerpiece of our Armed Forces our heavy capability. We have in the Active Force 12 heavier divisions, 9 heavier divisions in the Guard. We have 6 lighter active divisions and 1 light will be in the National Guard, the 29th Division.

Why the emphasis on light forces? Because of the events we focus on, like those yesterday. We must be prepared for low-intensity conflict, generally in the southern hemisphere of the world. Current estimates show 20 to 22 insurgencies and conflicts of various degrees ongoing. We must be able to deploy quickly to prevent conflict and significantly shorten it if it does occur. These light forces are not limited to that. Here you see them where they are being introduced into the tactical environment by repelling from the helicopter.



SOF FORCE STRUCTURE IMPROVEMENTS

We also see in the Army in recent years a tremendous increase in the Special Operations Force capability, meaning our special forces, our rangers, our psychological warfare and our civil affairs units. We have now four groups in the Army of special forces. That has increased. We have three battalions of rangers and a ranger regimental headquarters. You will see the personnel strength behind that move from 5,500 now to fiscal year 1991 to be in excess of 13,000. We will slip by 1 year activating an additional special forces group.

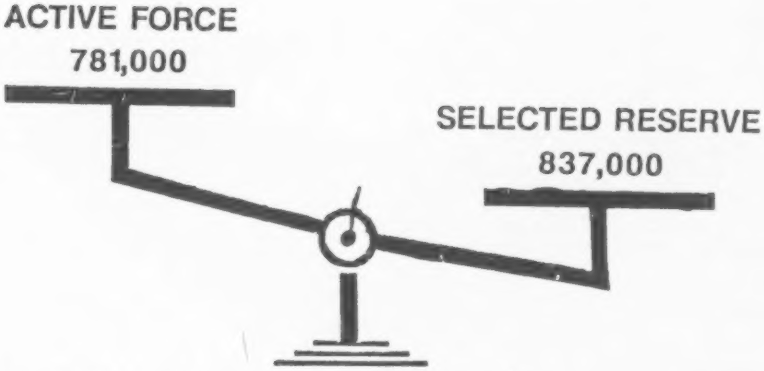
This line here indicates the Army's continued concern and our emphasis on our Special Operations Force's capability.

Senator THURMOND. Secretary Marsh, I have to open the Senate.

Senator Wilson, will you take over until I come back? I will be back as soon as I can.

BALANCE OF US ARMY FORCES

FY91



Mr. MARSH. One of the striking things about the organization and force structure of the Army is the emphasis that is being placed on the National Guard and on the Reserve. I use this scale to show how the Army will be structured by the year 1991. In the active force we have today 781,000 active soldiers. By 1991 we will have 837,000 in the Guard and Reserve. Now, I will say to you in this year we are almost one for one, one Guard and Reserve for one soldier in the Active Force. You will find here that $10.3 billion, 13 percent of the Army budget, goes into Reserves.

Now, I would like to mention the types of roles and missions to be performed by the Reserve today. This picture comes from Bright Star in Egypt where Reserves and National Guard served. Likewise down in Central America. This picture is from Panama where some 10,000 National Guardsmen last year from 10 different States built 40 kilometers of road in the remote region of Panama. They are performing those types of missions again this year, not just in Panama, but also in Honduras.

General Wickham will talk about this increase in readiness which occurred in the Army and how we have increased our combat forces.

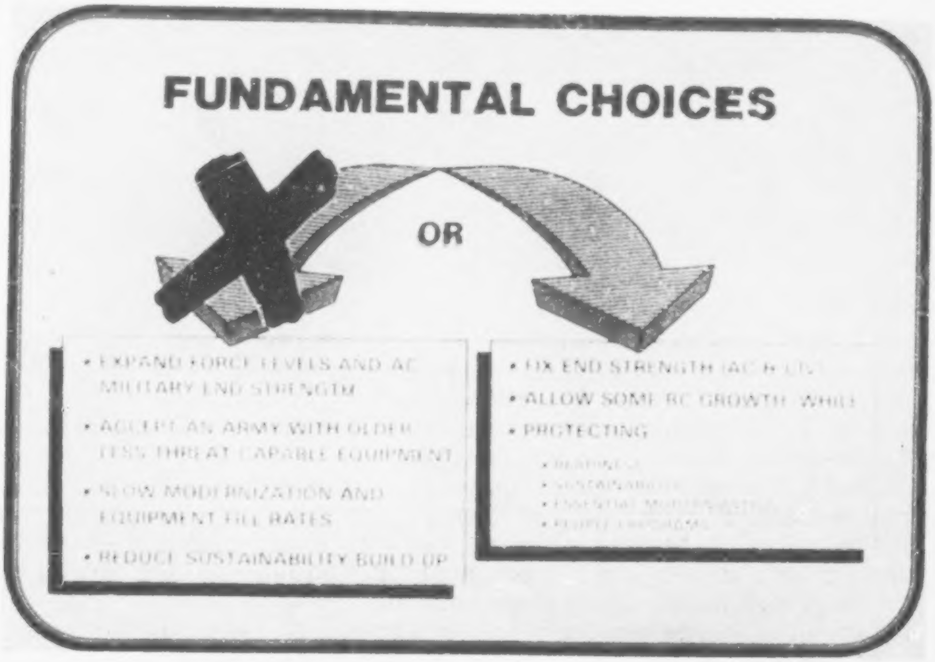
I do want to mention and invite you to go to the National Training Center because here we believe you will see the most effective military training anywhere in the world. Twenty-eight battalions of the Army go through that each year and two of those battalions will be from the Reserve Component.

Again, we would stress the emphasis that we place on binary capability. It is in our budget. We think that getting soldiers out of this kind of gear and relying on deterrence is more effective than fighting in preventative equipment.

Again, we emphasize the importance of deployability in order to carry out our mission as the deterrent force. We are short on airlift and we will continue to be short up to the year 1990. I will tell you there is a pressing need for intratheater lift as well as intertheater lift.

Regarding sealift, again, we need the ability to move our heavy equipment very rapidly to different areas of the world. Although the Navy has made great strides, we still have a shortfall on strategic sealift.

In the area of modernization you have seen scenes like this at this depot in Mannheim, Germany. They have been changed because of the efforts of this committee and the Congress working with the Department of Defense. Now, they look like this. This particular picture which is another motor pool, is what the Mannheim Depot will look like.



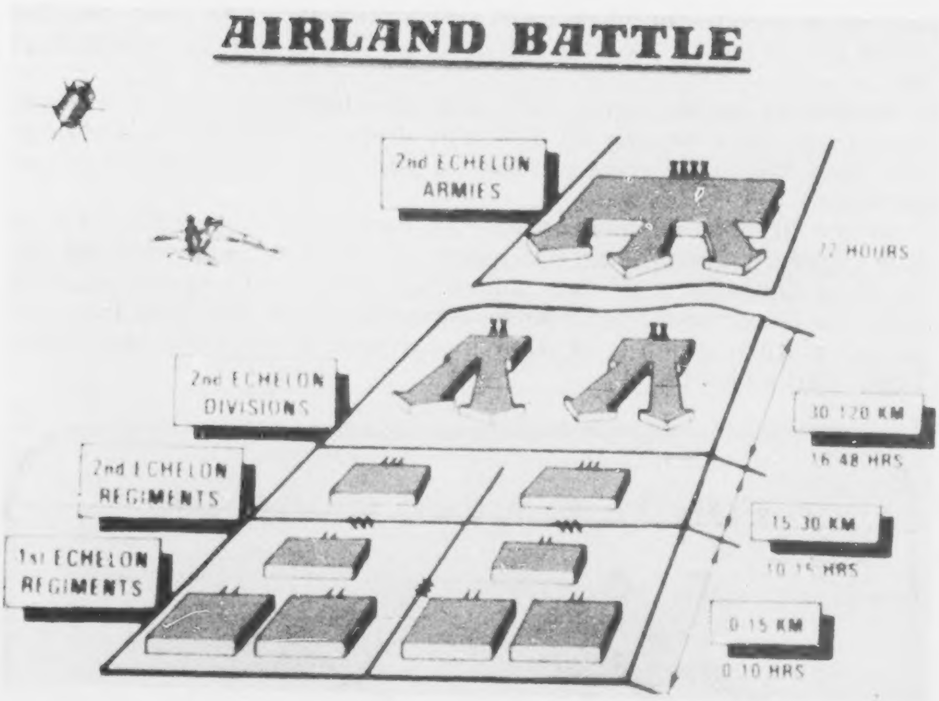
FUNDAMENTAL CHOICES

OR

- EXPAND FORCE LEVELS AND AC MILITARY END STRENGTH
- ACCEPT AN ARMY WITH OLDER LESS THREAT CAPABLE EQUIPMENT
- SLOW MODERNIZATION AND EQUIPMENT FILL RATES
- REDUCE SUSTAINABILITY BUILD UP

- FIX END STRENGTH (AC & CIV)
- ALLOW SOME RC GROWTH WHILE
- PROTECTING
  - READINESS
  - SUSTAINABILITY
  - ESSENTIAL MODERNIZATION
  - PEOPLE PROGRAMS

I would like to mention one aspect of force structure and I continue to remind the committee that over 4 years ago the Army made a decision to maintain an end strength of 781,000 and we would emphasize readiness, sustainability, modernization, and people inside of that 781,000 cap. We also will hold our civilian strength to approximately 410,000.



We have sought to build a very highly effective force, relying on technology and mobility in order to employ the doctrine of airland battle, anticipating the Soviets in their type of attack and being able to move rapidly with superior forces, relying on technology and better leadership and better soldiers.

Finally, I leave you with a quote from James Monroe who was a combat soldier from the American Revolution, who really knew and meant what he said when he said, "If it was wise and patriotic for us to establish a free Government, it is equally wise to attend to the necessary means of its preservation."

I am glad to be here and I look forward to responding to your questions.

[The statement of Mr. Marsh is as follows:]

Prepared Statement by John O. Marsh, Jr., Secreatary of the Army

A review of the history of the wars in which this nation has been embroiled during this century highlights the importance of conventional deterrence and war fighting capability. The Army is the cornerstone of our conventional capability. As it is land forces that can exert decisive control over people, resources, and territory, the Army serves as the centerpiece of national will to deter, and, if necessary, defeat an adversary. Furthermore, as we view the spectrum of possible conflicts, the need for a strong conventional force become increasingly the focus of our effort.

The Soviet Union's ground forces are the predominant source of their conventional capability. Last year I reported to you that the Soviet Union had 194 divisions. This year I report to you they have 199 divisions. While not all these divisions are of the same caliber, the fact remains that they continue to expand their force. Nearly 40 of these divisions are stationed outside the Soviet Union, including 4 in Afghanistan. Furthermore, with nearly three times the percentages of GNP devoted to defense compared to the United States, the Soviet Union continues to outproduce the United States in critical combat systems such as tanks by over three to one. Their new equipment is highly capable, incorporates modern technology, and dictates the need to sustain our modernization efforts to obtain parity.

The unique geographic location of the Soviet Union allows them to project land forces into Europe, Asia, and the Middle East without crossing a major body of water. This capability, coupled with their blue water Navy, has enabled the Soviets to project their military power and aggressive intentions globally. Their willingness to project ground combat forces is demonstrated in Afghanistan, which I already mentioned, where over 115,000 Soviet soldiers occupy the country. In our own hemisphere we know that the Soviet Union has combat forces in Cuba and more advisors in Peru than we have in all of Central America.

Even without the global Soviet presence and the active involvement of their surrogates, the Third World would be replete with instability and rivalries. There are over 20 active insurgencies and conflicts world-wide and numerous other nations with fragile political systems that are struggling to survive. Many of these insurgencies and conflicts and their attendant forms of violence like terrorism are fueled by Soviet arms. Furthermore, activism by the Soviets and their surrogates threaten other nations seeking to develop viable economic and political infrastructures. Many of these nations look to us for assistance in their efforts to develop systems that support democratic values.

These realities of the world in which we live are a key factor in shaping the Army today. The Army must be prepared to respond to potential challenges across the full spectrum of conflict. We must continue to uphold our vital interests in areas of traditional concern, and we must be prepared to combat more recent threats that challenge our interests globally. We must have forces capable of deterring and defeating the higher intensity threats that continue to grow in sophistication and extent. And, we must have forces capable of responding globally to the more likely low-intensity threats that pose an equal challenge to our national interests.

Our airland battle doctrine provides the framework to develop war fighting capability to overcome quantitative weaknesses of our forces and answer the challenge across the conflict spectrum. Airland battle takes advantage of national strengths in the quality of our people and the innovativeness of our society. Our modernization and procurement program is driven by this doctrine. Speed, maneuverability, and the massing of combat power at critical points are the keys to success with this doctrine. Effective communications, rigorous training, and initiative by soldiers and leaders are paramount.

To meet the challenges at the lower end of the conflict continuum, we are restructuring our forces to develop rapidly deployable forces, capable of sustained, vigorous combat. The creation of our light divisions and the expansion of special operations forces highlight this effort. The light divison is capable of responding to a global crisis in about one-third the time using one-third the airlift sorties of our extant infantry divisions. This rapid response capability not only serves as a viable deterrent to global threats, it enables us to position substantial war fighting capability to control threats early in a crisis, and possibly forestall the need for additional forces. With augmentation, these light infantry forces are capable of fighting anywhere our interests are threatened to include Western Europe. Our revitalization of special operations forces reflects the growing threat from terrorism and other low intensity conflicts. These forces are specially designed for limited objective operations. They demonstrated their flexibility in Grenada in 1983 by rapidly responding and projecting U.S. forces to support our interests.

These factors and the decision General Wickham and I made several years ago to hold active end strength constant to protect readiness, sustainability, and essential modernization are the key factors forging the Army. This fundamental decision considered demographic and fiscal factors and led to our initiatives to increase the reliance on, and capability of, the reserve component. The Army relies more than ever before on the Reserve component. We have focused the Guard and Reserve on appropriate missions and are providing them the support to meet their wartime commitments. Today they are full partners in the Army mission of deterring war.

The fiscal year 1987 budget request of $80.6 billion continues the balance we have established in the personnel, operations and maintenance, and investment accounts. This balance is designed to attract and retain quality soldiers, and provide them the support, training, and modern equipment needed on today's and tomorrow's battlefields. Furthermore, with 13 percent of the request targeted toward the Reserve component, this budget manifests commitment to these critical forces.

The decision to hold active strength constant to focus on readiness, sustainability, and modernization has proven wise. With the support of the members of this committee, we have an Army today that is far more ready to meet the diverse threats we face. Over 90 percent of our active accessions are high school graduates. This is 36 percentage points more than five years ago. And, while increasing Reserve component strength, we have also increased the quality of our RC accessions. Over 80 percent of our incoming reserve soldiers are high school graduates. We continue to meet and exceed our recruiting goals. Educational benefits have provided incentives needed to attract and retain talented young Americans.

We are midstream in our modernization effort. Since 1980, over 100 battalions and companies have fielded modern equipment such as the Bradley fighting vehicle, Abrams tank, patriot air defense system, multiple launch rocket system, and Black Hawk helicopter. We are now fielding the first Apache attack helicopter units and will soon field the mobile subscriber communications equipment. With the increased mission responsibilities of the Army National Guard and Army Reserve, we have accelerated equipment distribution to them under the "first to fight, first to be equipped" principle. Some early deployment reserve units already have Abrams tanks, Bradleys, and Black Hawks. Others are scheduled to receive these systems soon. This modernization provided over $1.5 billion of equipment to the Reserve component last year and we plan to provide over $2.0 billion in fiscal year 1987.

We must continue this pace if we are to regain the qualitative edge we need to attain the leverage to fight out-numbered and win. One of our most pressing needs is to acquire the capabilities to provide air defense for our combat forces. The threat is sophisticated, but we have a sound plan to develop a fully integrated system of air defense protection. In the area of chemical deterrence, we have taken the first step to develop a realistic chemical retaliatory capability. However, our deterrent capability will remain inadequate until modern chemical retaliatory munitions are fielded. I urge your continued support of binary munitions. Finally, given the massive offensive capability and doctrinal employment of Soviet forces, we must attain the capability to see, fix, and attack deep. To accomplish this we must take advantage of technologies that offer us the opportunity to influence the battlefield markedly. And, we must continue to explore the possibilities of technology through a vigorous research and development program.

Tough, realistic, and effective training is the cornerstone of readiness. Our expenditures on training facilities, devices, and simulations have increased over 500 percent in the past six years. The national training center is an excellent example. Since its inception in 1980, we have progressed to a training rate of 28 combat maneuver battalions annually. It is the most challenging, realistic training in the world. It shows the ability of simulation and training devices to increase the training levels of the Army. Furthermore, some of our newest aviation and tank training simulators pay for themselves in three years or less. They challenge soldiers and provide cost effective and realistic training.

Our Reserve components are integrated into these national training center cycles as well as into our overseas deployments. During the last year, for example, armor units from the Texas Guard deployed to Honduras and the 32d Infantry Brigade from Wisconsin deployed on this winter's Reforger exercise in Germany. Army Reserve units from the 81st Arcom and 121st Arcom provided engineer support in Panama. These exercises lead to improved readiness for our National Guard and U.S. Army Reserve.

In addition to across the board increases in war reserve stocks, since 1980 we have more than doubled our materiel in unit sets of equipment prepositioned overseas. These improvements not only show our resolve to support allies in critical theaters, they also greatly reduce our global sea and air lift requirements and response time. We have also made great progress in our efforts to develop host nation support agreements with our allies. These are cost effective initiatives that improve our war fighting capability. Our individual ready reserve has increased to over 300,000. We have begun to initiate musters to improve the readiness of this element of our Reserves, the largest category of pre-trained manpower available during a mobilization.

Despite the cap on active strength, this year's activation of the 6th Infantry Division (light) in Alaska marks the fourth new division, three of which are light divisions, since 1980. One of those new light infantry divisions is the 29th Division (light) in the Army National Guard formed from units in Maryland and Virginia. With the conversions of two other divisions to the light infantry design and the ongoing streamlining of armored and mechanized divisions to reflect airland battle doctrine, we will achieve the necessary balance in our 28 division force. Efforts to strengthen special operations forces will continue. We have activated a fourth special forces group and a ranger regimental headquarters for the three ranger battalions. In light of their global missions, we are enhancing SOF communications and support capability and the fiscal year 1987 budget supports improvements in SOF aviation. As you know, many of our SOF units, particularly civil affairs and psychological operations units are in the Reserves, and they will continue to provide the majority of soldiers. We need your support to maintain the balance we are achieving between Active and Reserve components, heavy and light units, combat and support capability, and forward deployed and U.S. based forces.

Our Army today is ready and capable. It is responsive and relevant to the world situation. We are also responsible stewards of the resources with which you entrust us. All of you are familiar with the many stories, most of which we discovered ourselves, about waste, abuse and unwarranted price escalation. Each year we provide Congress the selected acquisition report required by the Nunn-McCurdy amendment. My first report to the Congress five years ago showed considerable cost increase in several systems. Since that time, the number of systems reported has increased over 50 percent and their value has increased to nearly $100 billion. The rate of cost growth has declined significantly and all the systems reported out of tolerance five years ago are now on track. The initiatives to award multiyear contracts, when appropriate, have been a significant factor in reducing costs. This year we are proposing new multiyear contracts for the Stinger missile and the patriot air defense system. We are acquiring equipment for our soldiers in a sensible, businesslike manner. We have moved vigorously to push competition where it makes sense. This past year nearly $15.0 billion, or just under 47 percent of our procurement dollars were awarded competitively. We plan to increase the percentage to 50 percent this year. And, we are prosecuting those who defrauded the Government. We recovered over $3 million last year and took action against well over 100 contractors. We have created a fraud, waste and abuse task force consisting of some of the principals of the Secretariat and Army staff to assist in these efforts. We understand our responsibilities and are executing them.

Finally, I want to discuss our fiscal year 1987 request for $80.6 billion dollars in total obligation authority. As you know it is part of the defense budget that is the middle year of our 0-3-3 agreement. It does represent real growth for the Army over last year, but, taken in the context of all Army budgets from 1970 to the present, still leaves the Army with a real decline over that period. During these same years we have watched North Vietnam swallow the South, then Laos and Cambodia; the advent of Communist regimes in Angola and Ethiopia; the invasion and occupation of Afghanistan; the development of a Cuban-Soviet supported regime in Nicaragua to our south; and a massive increase in the quality and quantity of Soviet forces and weapons pointed toward our friends and fueling terrorism and instability throughout the world. Now is not the time to turn back. Reductions in our requested programs will have significant impacts, particularly when combined with the cuts in fiscal year 1986, causing negative consequences for our deterrence and war fighting capabilities. We must continue the progress in long overdue modernization. We must continue to attract and retain soldiers with the needed skills, spirit, and dedication. With your support we can continue to build an Army that is ready, responsive, and responsible.

STATEMENT OF GEN. JOHN A. WICKHAM, JR., CHIEF OF STAFF, U.S. ARMY

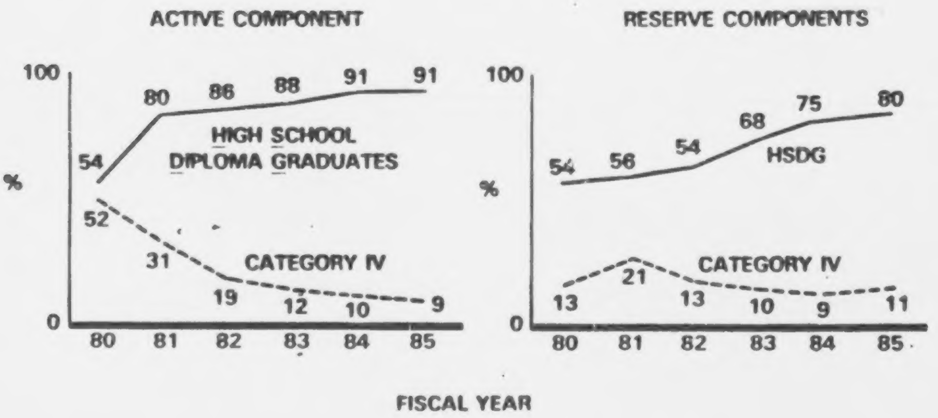
General WICKHAM. Mr. Chairman, if I can I will pick up on what Secretary Marsh touched on here and then talk about a few aspects of the Army so that you get a better feel for what we are trying to do in this budget. We do have a vision for the Army, a coherence in what we are trying to do. I will touch on these subjects briefly and then elaborate on them for you.

VISION FOR THE ARMY

- QUALITY SOLDIERS & STRONG FAMILIES
- FLEXIBLE, MODERN FORCE FOR CONFLICT SPECTRUM
- HIGH TECHNOLOGY AND PRODUCTIVITY ENHANCEMENTS
- AIRLAND BATTLE DOCTRINE
- JOINT AND COMBINED CAPABILITIES
- TACTICAL AND STRATEGIC DEPLOYABILITY
- STEWARDSHIP

Obviously, people and people support are very important to the quality of the Army. With these programs we are trying to build a balanced force. Secretary Marsh talked to you already about that. The modernization program, capitalizing on technology, is putting the best equipment with the best people. We have a modern air land battle doctrine that capitalizes on joint capability as well as coalition capability. In tactical and strategic deployability, we are doing many things to improve our posture for rapid force projection. Finally, I will address our responsibility to stewardship. It is important for us to demonstrate that we are doing right by the resources, using more competition, more managerial oversight, and that we are doing a good deal in that regard.

QUALITY SOLDIERS

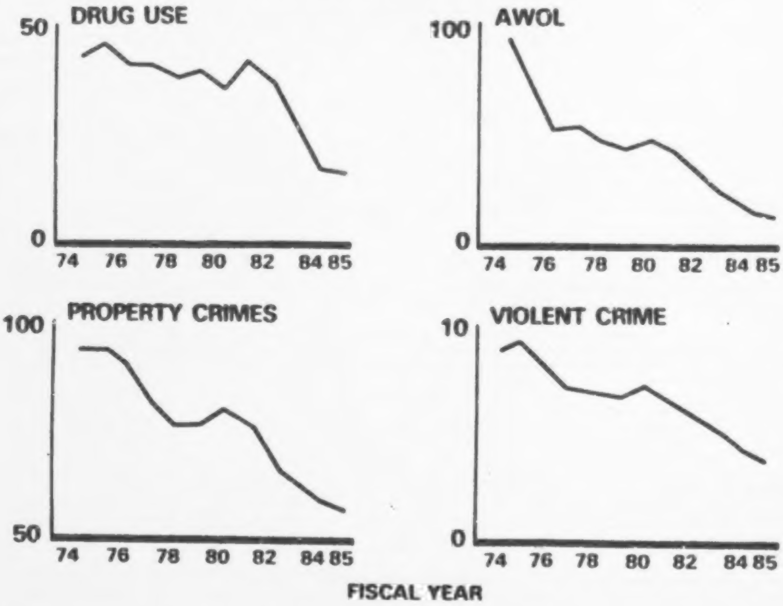


I told you about quality soldiers. As Secretary Marsh indicated, this shows the growth of high school diploma graduates coming into the Army. You can see it is the highest in the Army record and we are still bringing them in. Those tested in mental category IV, the lowest we take in are not the lowest in the Army's history.

The same holds in the Reserve component, although not quite as good a picture as in the Active side, but still a very good one indeed. The GI bill has helped in that regard, and it is an attractive enlistment option.

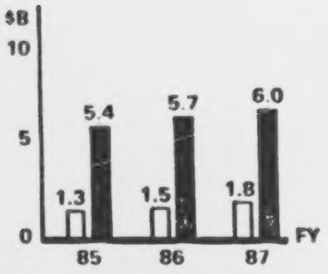
DISCIPLINE IN THE ARMY

(RATES PER 1000)



The discipline in the Army, as demonstrated by the rates of indiscipline are the lowest in the Army's history. If I put the courts-martial chart up here, it would look just like this one, totals going off to the lowest, again, in the Army's history. Something happened in 1980 and every chart has that precipitous decline since 1980. There is something going on about being in the service. This is a good place to be and there are things happening. There is support in the country and there is support from the Congress. The soldiers feel better about service and it is displayed in these kinds of charts.

QUALITY OF LIFE PROGRAMS

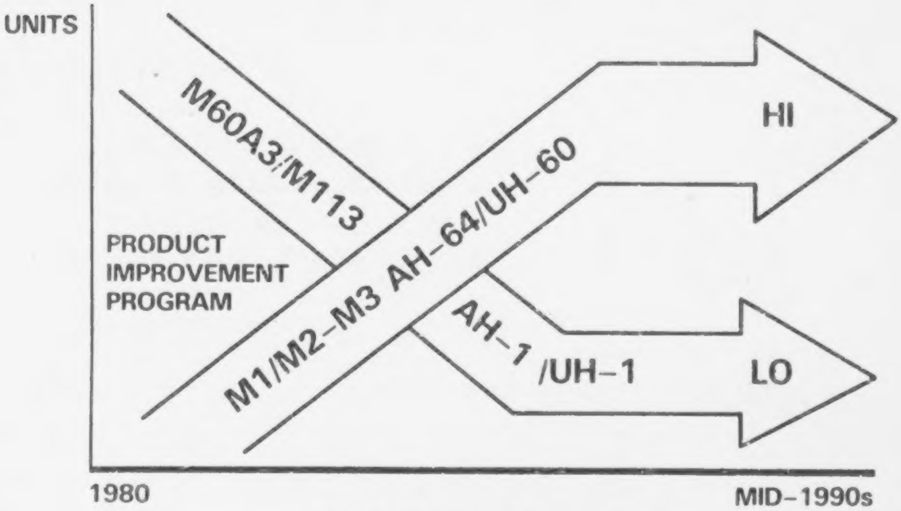


- HOUSING
- LIVING AND WORK PLACE
- CHILD DEVELOPMENT
- COMMUNITY SUPPORT
- REPAIR & MAINTENANCE
- YOUTH ACTIVITIES
- SOLDIER/FAMILY SVCS

QUALITY SOLDIERS, STRONGER FAMILIES . . . A MORE READY ARMY

In quality of life—Senator Wilson, you have been very strong in support of this as well as other members of the committee here—we are putting our money where our mouth is in taking care of families. The better the families feel about the Army, the readier the force. We put money into improving quality of life for families, better medical care, decreased incidents of child abuse, drug and alcoholic abuse, as well as improving the quality of living through better quarters for single soldiers as well as married soldiers, improving the maintenance of facilities. That is what this growth means in that black part of the chart.

HIGH - LOW MIX MODERNIZATION STRATEGY



- *MEETS THE THREAT*
- *COST EFFECTIVE*

What are we doing in the way of modernizing? As you know, from your long tenure here working with defense programs, that all of the services work on a high-low mix. We have modernized part of the service with modern equipment. The Army is modernizing the heavy side going to the most threatened alliance structure in the world, NATO. That is what these represent here, the M1 Abrams tank, Bradley fighting vehicle, the Apache attack helicopter, and the Black Hawk helicopter. We have been modernizing only part of the Army, the high side. The low side of the mix, these older items of equipment, M60A3 tank, armored personnel carrier, the old Cobra and Huey helicopters, we are continuing to product improve. This is something that goes on all the time.

So when I talk about modernizing the Army, we are only modernizing a part of the Army.

MODERNIZATION

(CONGRESSIONAL AUTHORIZATION THRU FY86)

EQUIPMENT

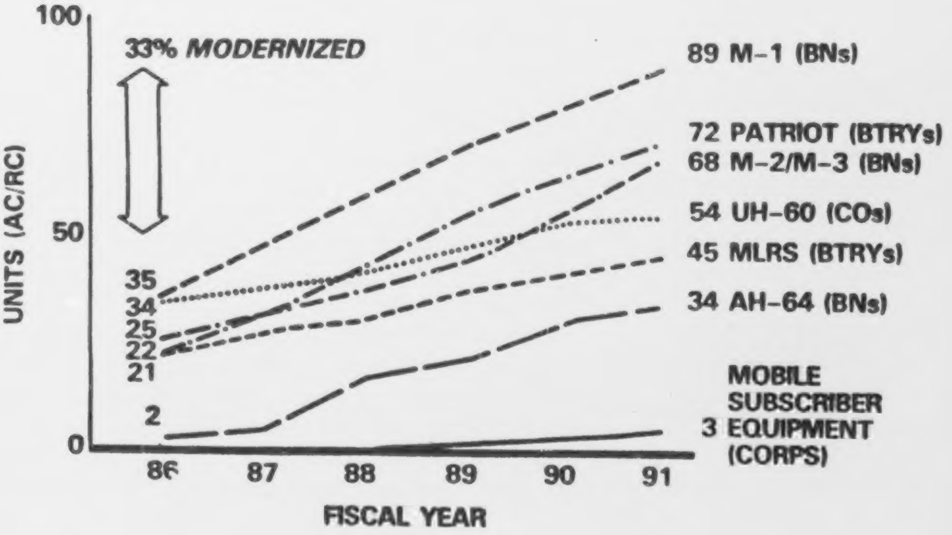
5,000 M1 TANKS
3,700 BRADLEYS
1,600 HELICOPTERS
95,000 TRUCKS
850 HOWITZERS
350 MLRS LAUNCHERS
39,000 NIGHT VISION DEVICES

MODERN MUNITIONS

188,000 MLRS ROCKETS
15,000 STINGER
69,000 TOW II
23,000 COPPERHEAD
21,000 HELLFIRE

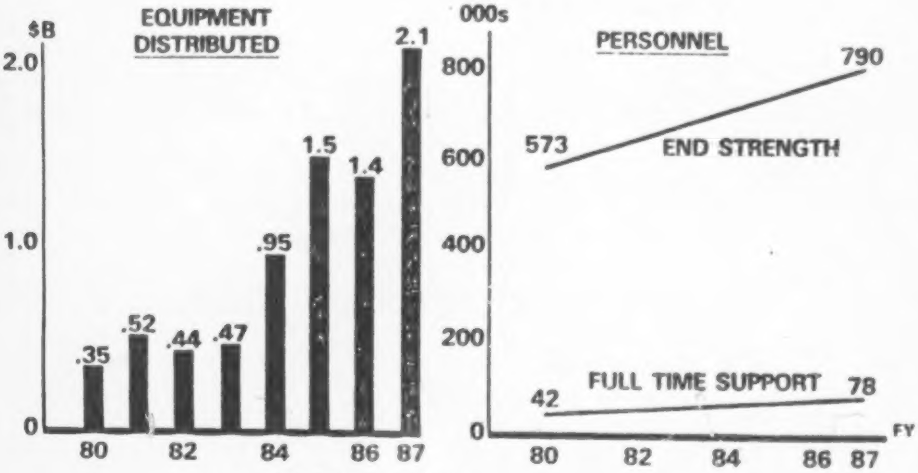
This chart illustrates some of the items of modernization, thanks to the Congress, that we have been able to do. Five thousand M1 tanks, some 95,000 trucks, Howitzers, Multiple launch rocket system—MLRS—launchers, night vision devices, and munitions. What does that translate into in the way of units?

UNIT MODERNIZATION



This illustrates the point. This again is the high side only, M1 battalions, Patriot batteries, Bradley battalions, Black Hawk companies, multiple launch rocket system batteries, attack helicopters, and mobile subscriber equipment—MSE—for the corps. We are only here and we are headed for this part, which again is only the high side of the Army. We are only a third of the way through. That is what Senator Thurmond raised in his initial statement today about modernizing efforts underway in the Army. The Army, again, is modernizing after the other services. We have farther to go, but we are only modernizing the high side, not modernizing the whole Army. We cannot afford to continue to do that, given the top line available to us.

RESERVE COMPONENTS

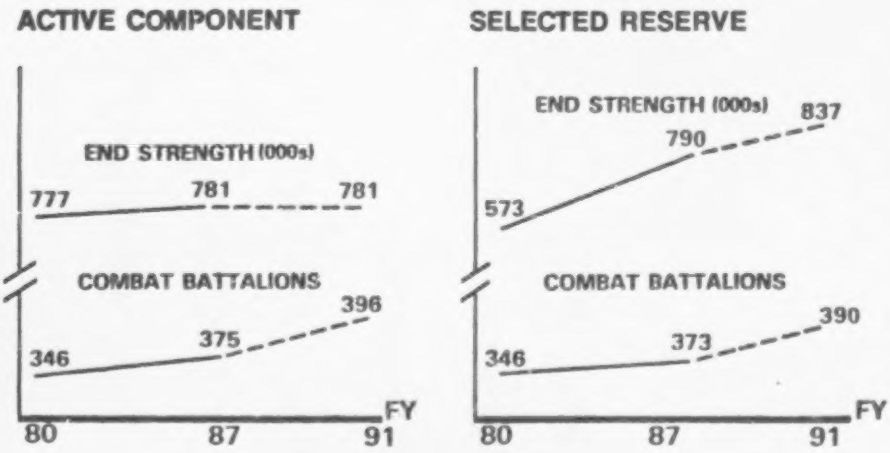


. . . FIRST TO FIGHT

. . . FIRST TO BE EQUIPPED

What are we doing in the way of supporting the Reserve component? That is part of the equation for the Army. You can see there is continued reliance on the Reserve component. Their end strength is growing and they are now larger, the National Guard and Army Reserve, than the Active Army. The Active Army, incidentally, is the smallest in 36 years. That, in part accounts for our high level of Reserve component full-time support personnel. If you are going to have more reliance on National Guard and Army Reserve, you have to have a full-time cadre. We are putting our money where our mouth is in terms of equipment, jumping from under $1 billion to $2 billion of equipment flowing into the National Guard and Army Reserve. This includes M1 tanks. That will continue, Congress willing and Gramm-Rudman-Hollings willing, in the future.

GROWTH OF COMBAT CAPABILITY



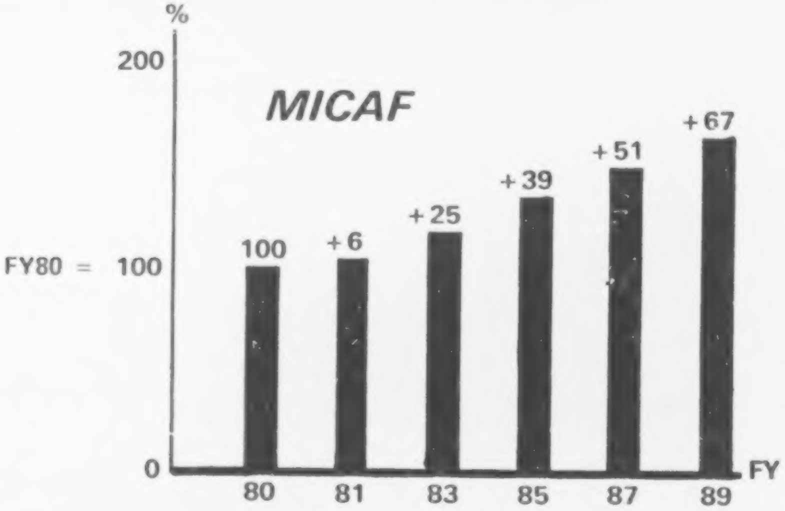
INITIATIVES

- *PRODUCTIVITY ENHANCING TECHNOLOGY*
- *ORGANIZATIONAL MODERNIZATION*
- *HEADQUARTERS REDUCTIONS*
- *RESERVE COMPONENT GROWTH*
- *CIVILIAN SUBSTITUTION, CONTRACTING*
- *HOST NATION SUPPORT, CONTINGENCY CONTRACTING*

The preceding chart indicated the growth in National Guard and Army Reserve here in end strength, and the growth in combat battalions, obviously, will grow with that. This is a rather remarkable part of the chart, which shows the point that Secretary Marsh made, that the end strength of the Active Army has been fixed over the recent years, and we intend to hold it constant the rest of this decade, circumstances willing. Yet we have been able to grow the combat battalions within the Active Army even within that fixed end strength. It is not done by mirrors. It is done by capitalizing on productivity and enhancing technology. Mobile subscriber equipment, for example, will save 8,000 soldiers that we can push into combat capability. We have changed the way to do business in the way of headquarters. We have cut the Army staff now 2 years running and we have cut other headquarters. We have transferred those people into combat capability. We have done much in the way of host nation support and more can be done there. All of those activities, these initiatives, have led to providing more combat capability within the fixed end strength of the Army.

Secretary Marsh indicated, what have we got in the way of improved capability for the money that has been allocated to us? Where has the trillion dollars gone that was given to the Defense Department in the last 4 or 5 years?

TOTAL ARMY
MEASURING IMPROVED CAPABILITIES OF ARMY FORCES



MAJOR COMBAT UNITS (DIVISIONS, SEPARATE BRIGADES, ARMORED CAVALRY REGIMENTS)

We developed a model, measuring improved capabilities of Army Forces [MICAF] for measuring our qualitative as well as the quantitative improvement vis-a-vis the enemy. You see the UNITREP system we have does not evaluate against the enemy. Therefore it does not take into account qualitative improvement. The MICAF model does. What we are measuring here is the capability of all of our combat capabilities: divisions and separate brigades, Active and Reserve component, against the Soviet force in 1988. We have taken the Soviet force here with their qualitative improvements and measured what we are doing in relationship to that.

You can see there has been a substantial growth in capabilities. Quality does make a difference. That is what this shows. The investment in modernization, modern munitions and modern vehicles, does make a difference on the battlefield.

JOINT FORCE DEVELOPMENT PROCESS

- ORIGINAL 31 JOINT INITIATIVES NOW 35-OVER 50% IMPLEMENTED
- ARMY, NAVY AND AIR FORCE PARTICIPATE
- DIRECT SUPPORT TO THE COMBATANT CINCS
- COMPLEMENT RATHER THAN DUPLICATE CAPABILITIES
- INCREASE TOTAL FORCE EFFECTIVENESS
- $1 BILLION COST AVOIDANCE

We have not neglected joint force development. Obviously, if we go to war, we go jointly and we would go in a coalition way. These facts illustrate areas where we have made great progress. I know this committee has been instrumental in its report in trying to reorganize how we do business in a joint way and this falls in with that. General Gabriel and I signed an agreement a couple years ago on joint initiatives. There are 35. They have led to improved capability, as this indicates, and about $1 billion of cost avoidance. More can be done here and these initiatives are growing. We have also accomplished several initiatives with the Navy under an agreement for joint strategic mobility development and coordination.

AREAS OF SPECIAL CONCERN

- BRADLEY FIGHTING VEHICLE
- LIGHT HELICOPTER FAMILY
- AIR DEFENSE

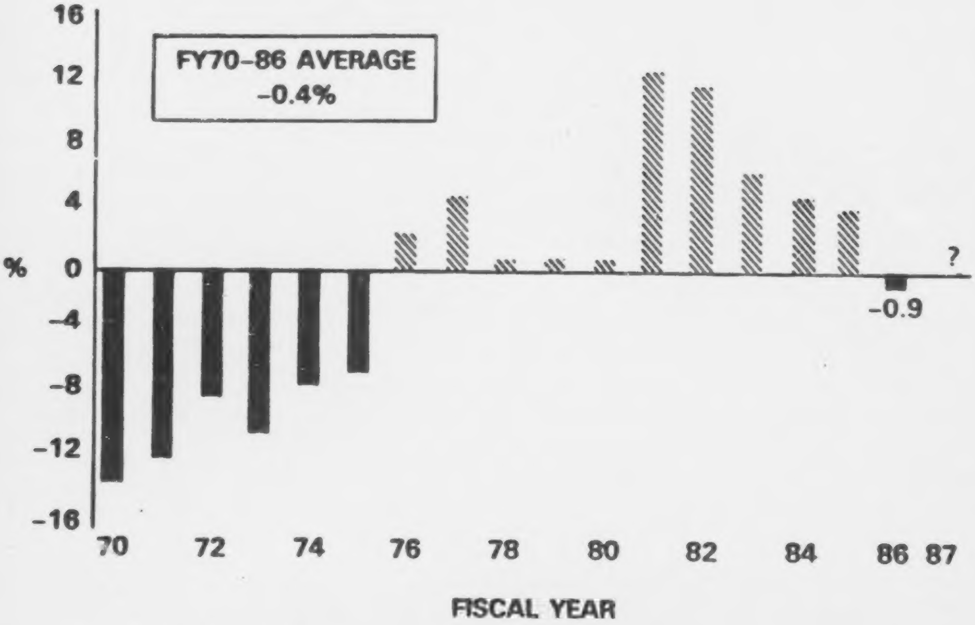
Three areas of concern that I leave with the committee here, among the others that you have developed on your own.

The Bradley fighting vehicle has come in for some criticism in recent months, criticism that suggests that the vehicle is no longer capable of performing its mission. I would say that the vehicle was designed to provide a capability for our infantry to keep up with the M1 tank, a capability that would provide offensive firepower on the ground in support of the combined arms team. The tests we have conducted in the way of vulnerability demonstrate that the vehicle does need some minor improvements, such as spall liners and some reactive armor on the outside. Still, all and all, that vehicle is an essential element of the combined arms team and we need it. We already have several thousand of them. It is not in the same vein as the Division Air Defense [Divad].

In regard to the light helicopter family, if we do not modernize our helicopter fleet, the light side of the fleet, by the mid-1990's the average age of our helicopters is going to be approaching 20 years. What we are trying to do in the LHX is to accomplish leap-ahead technology in terms of building the capability that will replace this ancient fleet. We need to move ahead in the technological development here.

With the Divad being killed as a program, we need a capability in the field that will compensate for the inadequate capabilities to defend the investment we have made in the M1 tank and Bradley fighting vehicle and other sophisticated means on the battlefield in Europe. We have submitted a proposal which has been approved by the Secretary of Defense that will provide for an air defense capability for the forward and rear areas.

ARMY REAL GROWTH TRENDS



The last thought I leave with you here illustrates what has happened to the Army as it is trying to deal with its vision for the future. This shows the real rates of growth in the defense budget share that the Army has over these fiscal years. As you can see, in the early seventies the Army had a net negative real rate of growth, and we lived off the shelf. That is not because we were not proposing change. We just never received the funds to do that. Not until the rate of growth shown in the late seventies did we receive the funds to go positive and not until the eighties did we begin the modernization. The other services, incidentally, began their modernization earlier than the Army did. This minus 1 percent represents the effect of Gramm-Rudman-Hollings sequestering in 1986. We are now back in the red. I do not know what will happen in 1987, whether we will be at the margin here or in the red. The point of this chart is to illustrate that the modernization planning which began in the Army in 1980 is making up for a decade of neglect or oversight. We have a long way to go, and we are only a third of the way in terms of modernization.

Thank you very much, Mr. Chairman.

[The prepared statement of General Wickham follows:]

Prepared Statement by Gen. John A. Wickham, Jr., Chief of Staff, U.S. Army

Mr. Chairman, members of the Senate Armed Services Committee. I welcome the opportunity to report on the state of today's Army and on our FY87 budget. While the Army posture statement provides a comprehensive discussion of our military capability. I want to focus on the importance of modernization and the essentiality of maintaining the momentum of Army programs.

As you know, our national strategy calls for deterring potential hostilities across the full spectrum of conflict. This involves protecting our global interests and safeguarding the United States, its allies, and friends from aggression and coercion.

The world of today is now more dangerous than ever before. We see the growth of international terrorism, the spread of low intensity conflicts in the Third World, the relentless expansion of Soviet influence in such countries as Afghanistan, Cuba, Nicaragua, Libya, South Yemen, Syria, and North Korea, and the Soviets' substantial investment in the modernization of their Armed Forces—estimated to be from 15 to 17 percent of their GNP.

All of this means that peace and U.S. interests around the world continue to be threatened. This also means that the prescription for deterring hostilities across the spectrum of conflict calls for balance between U.S. strategic and conventional forces, maintaining readiness and modernization of these forces, assuring top quality personnel to man our forces, and keeping national vigilance.

The conflicts of this century, including the war against terrorism, reaffirm that wars are ultimately fought to control land, people, and resources. While all of our military services have the capability to influence these elements of national power, only ground forces can exert decisive and lasting control over them. In the nuclear era, landpower has become increasingly important to U.S. military strategy as a greater share of the burden of deterrence shifts to modern, conventional ground forces. The strength of our deterrence is established by forward stationed forces, integral to alliances, and by rapidly deployable forces that can move to troubled areas of the world so that they can influence events to our advantage.

This is why the Army must recruit and retain high quality soldiers in the small active Army as well as the Reserve components, and why we must maintain balanced forces from special operations forces and light divisions, for rapid deployment worldwide, to heavy forces which are essential for high intensity combat and NATO defense. It is also why the Army must continue modernizing its equipment to keep pace with the threat and with technological advances. Thanks to the American people and to the Congress, solid improvements have been made in recent years to the Army's military capability. In order to continue this kind of progress in fiscal year 1987 we are requesting $80.6 billion. This investment is necessary if our small Army is to be an Army of excellence: one that is ready, responsive, and responsible.

The Secretary of the Army and I share a common vision of how the total Army—Active and Reserve components--should prepare for land combat both today and tomorrow. The elements of this vision are:

To provide quality soldiers and strong families in the Active and Reserve components.

To field a flexible, modernized force to fight across the conflict spectrum.

To develop high technology and productivity enhancements.

To exploit operational and tactical dimensions of air/land battle doctrine—the basics of fire and maneuver. Air Force and Army.

To fight and sustain as part of joint and combined forces.

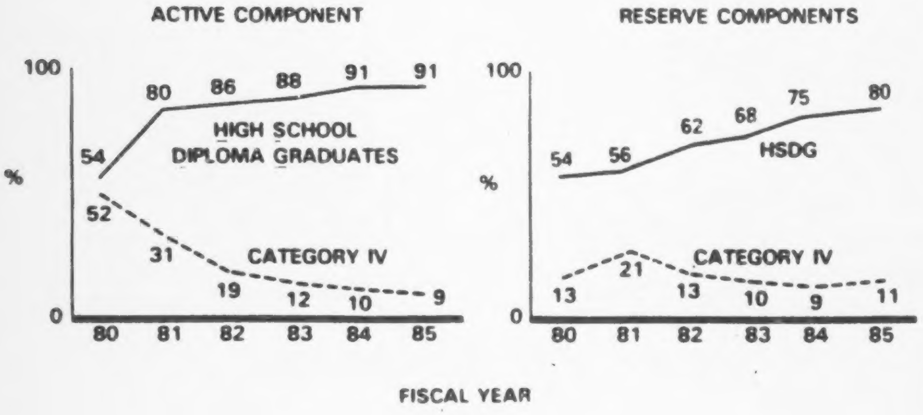
To improve tactical and strategic deployability.

This vision keeps in view the developments of our potential adversaries as well as the promise of the high technology and industrial advantages enjoyed by the U.S. and its allies. The doctrine and organizational concepts are in place to enable the Army to realize its vision. With your support and that of our citizenry, we will move forward, always ready and prepared to serve the interests of our great Nation.

PEOPLE

A quality Army starts with quality soldiers supported by strong families, and I am happy to report that we have made great progress. As the chart below shows, active component accessions of high school diploma graduates [HSDG] have increased significantly since 1980, as have Reserve component HSDG accessions. Category IV accessions remain at low levels. In fact, these are historical lows for the active component. These increases in quality reflect the support provided by this committee and the attention you have given to the recruiting and retaining of top-notch people in the Army.

QUALITY SOLDIERS

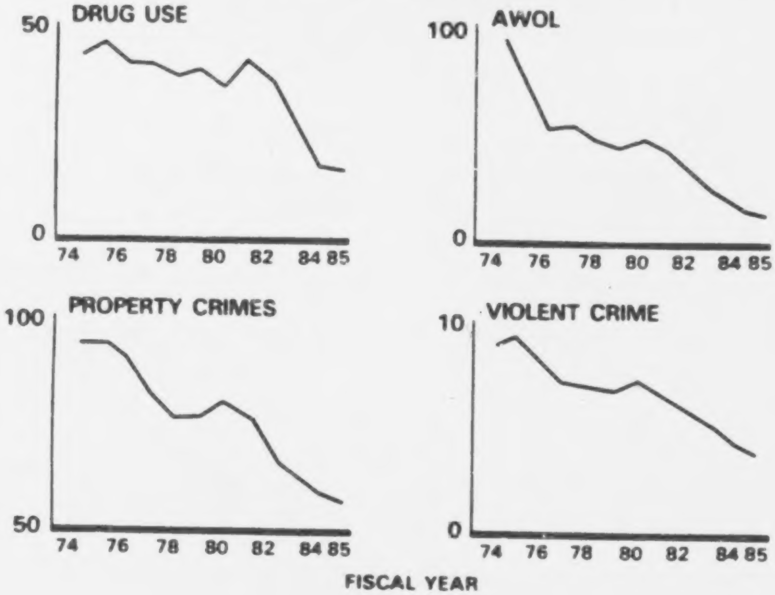


[CHART 1]

At the same time that quality has increased in the active Army, rates of indiscipline have decreased. Drug offenses, AWOL, crimes against property, and violent crime are down significantly, as shown on this chart.

DISCIPLINE IN THE ARMY

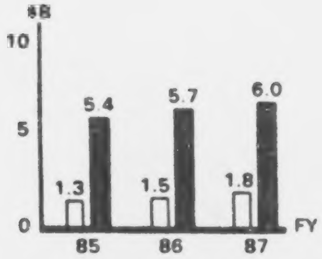
(RATES PER 1000)



[CHART 2]

Moreover, with your support, we have made great strides toward providing a solid quality of life for our people and their families. The chart below shows that substantial resources have been programmed for, and invested in, quality of life and family programs. The FY87 resources will continue to improve living and working conditions and will meet a diverse set of needs, ranging from family housing to child development to maintenance and repair shops to soldier and family services.

QUALITY OF LIFE PROGRAMS



- HOUSING
- LIVING AND WORK PLACE
- CHILD DEVELOPMENT
- COMMUNITY SUPPORT
- REPAIR & MAINTENANCE
- YOUTH ACTIVITIES
- SOLDIER/FAMILY SVCS

QUALITY SOLDIERS, STRONGER FAMILIES . . . A MORE READY ARMY

[CHART 3]

This effort is worth every dollar that we invest. Recently, while visiting Reforger units in Europe, I saw that our commitment to soldiers and their families has paid off significantly in terms of their increased commitment to a more ready Army. They see the very meaningful accomplishments that the Army has made to improve their quality of life, and their own resolve increases. Thus, the better soldiers and their families feel about the Army, the better is Army readiness.

Let me share with you a letter that makes this point. It is from a young paratrooper whom doctors saved from death after a parachute accident:

"Life's difficulties are always cropping up, but in the Army, people make up for the things that go wrong. There is always someone who will help in the Army. When the doctors thought I would never make it, my unit never gave up.

"They stayed behind me and behind my wife and my family the whole way. Words cannot express my thanks and the thanks of my wife for the care that my company commander, my first sergeant, and my Army buddies showed during the most difficult time in our lives.

"And that's what the Army is all about, taking care of each other. I appreciate what the Army is doing for families, and, you know what? I'm proud to be a soldier."

We need your continued support to attract and retain quality people. Our young people are "seed corn" for the future. We cannot afford to lose them. Also, we cannot afford to lose our more senior NCO's—the "backbone" of our Army—as we did several years ago, because that loss means a loss of leadership and experience that takes years to recover.

I remain convinced that diminished support for quality of life programs, including the important educational benefits for active and Reserve component soldiers, will jeopardize the volunteer force concept, increase turbulence, and lower combat readiness.

As a final point on people, let me request your assistance to fix a retirement funds issue from last year. The FY86 Department of Defense authorization bill directed the Department to submit legislation to achieve a $2.9 billion savings by changing the military retirement system for new personnel entering the service, and those funds were cut from the services' budgets. The Department submitted two alternative retirement system proposals, but legislation has not been enacted. In the meantime, service members are entering the service under the present retirement system which requires a restoration of the funds.

We have received temporary relief by the Congress—a transfer of $2.9 billion from prior year balances, while Congress considers legislative changes to the retirement system. If Congress does not lift the cap on obligations, or change the retirement law, the services would have to reduce their forces by over 330,000 Active and 176,000 Reserve personnel For the Army, that means a devastating reduction of 120,000 Active and 112,000 Reserve component soldiers.

MODERNIZATION

Quality people deserve quality equipment particularly when we may be outnumbered by potential enemies. A key improvement to our military capability is modern equipment for Active and Reserve forces. Modernization means both enhanced readiness and sustainability. New equipment gives us a better capability on the battlefield and better operationally ready rates. This chart illustrates the types of equipment and modern munitions the Congress has authorized us to procure through FY86, and it also depicts an aggregate measure of how much the force will have improved by replacing older items with state-of-the-art equipment and munitions.

MODERNIZATION

EQUIPMENT

5,000 M1 TANKS
3,700 BRADLEYS
1,600 HELICOPTERS
95,000 TRUCKS
850 HOWITZERS
350 MLRS LAUNCHERS
39,000 NIGHT VISION DEVICES

MODERN MUNITIONS

188,000 MLRS ROCKETS
15,000 STINGER
69,000 TOW II
23,000 COPPERHEAD
21,000 HELLFIRE

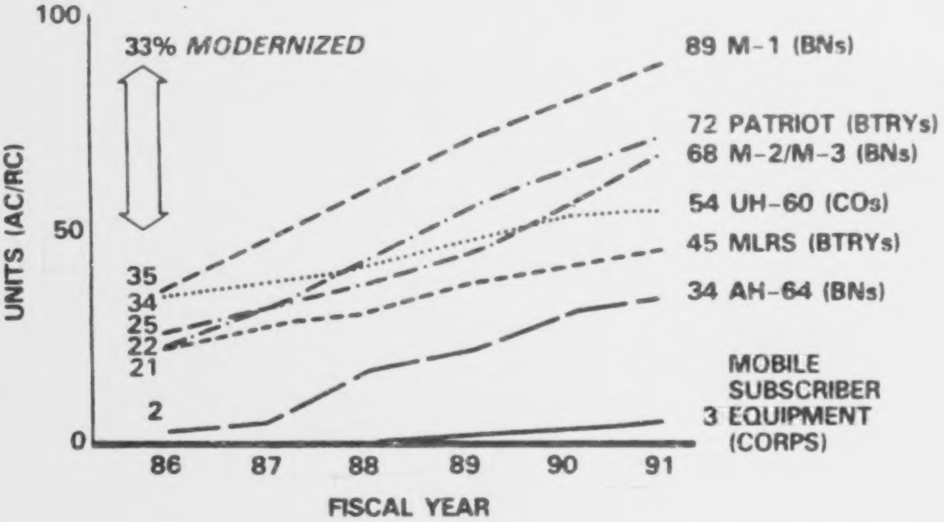
(CONGRESSIONAL AUTHORIZATION THRU FY86)

. . . ENHANCED READINESS AND SUSTAINABILITY

[CHART 4]

This equipment modernizes units and as the chart below shows, an extensive amount of unit modernization occurs over the next five years. We have made great progress, but we will have modernized only the active "heavy division" force and their affiliated "round-out" units by the early 1990's. Much more remains to be done.

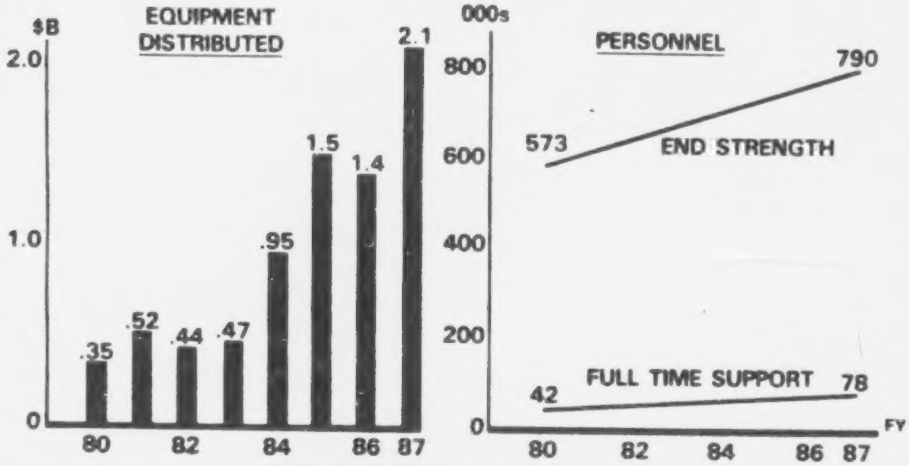
UNIT MODERNIZATION



[CHART 5]

Below, you see the significant growth in the amount of equipment distributed to the Reserve components in the last several years. They are getting "product improved," older equipment from the Active Army as well as new equipment. The chart also shows how we have increased the personnel strength of the Reserve components. New equipment and training for mobilization and deployment, require the support of full-time personnel. The chart shows the resultant growth in full-time support (AGR's and technicians) for the ARNG and USAR.

RESERVE COMPONENTS



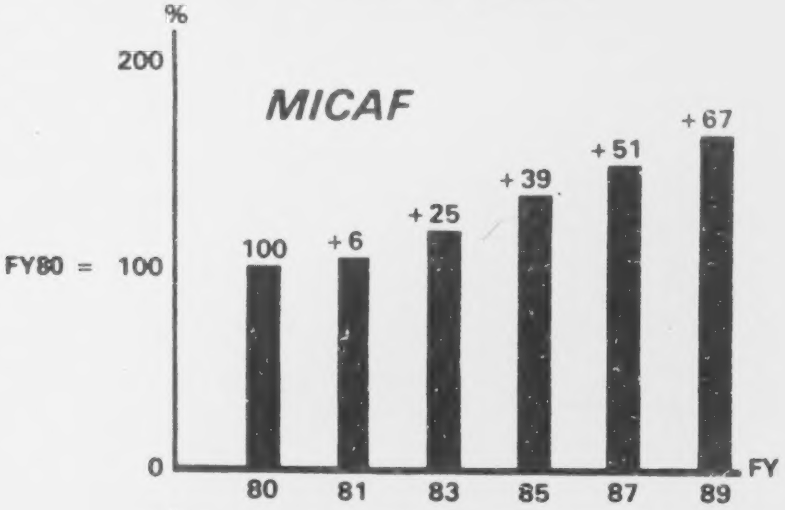
. . . FIRST TO FIGHT

. . . FIRST TO BE EQUIPPED

[CHART 6]

Another way of showing growth in capabilities for the total Army is the "measuring improved capabilities of Army forces [MICAF]" study. MICAF quantifies capability improvements in Army divisions, separate brigades, and armored cavalry regiments in relation to the threat capabilities likely to be faced. In this sense, it is the most realistic evaluation of capabilities available to us. As the chart shows, since 1980, the capability of our major combat units in relation to the threat has increased almost 40 percent. Projected increases are shown for FY87 and 89.

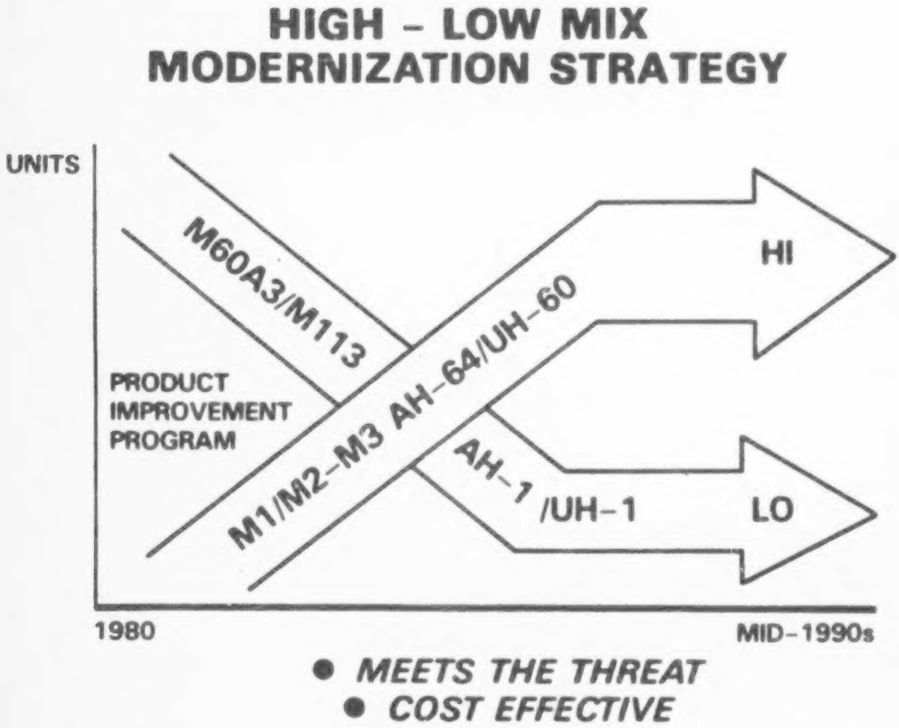
TOTAL ARMY
MEASURING IMPROVED CAPABILITIES OF ARMY FORCES



MAJOR COMBAT UNITS (DIVISIONS, SEPARATE BRIGADES, ARMORED CAVALRY REGIMENTS)

[CHART 7]

The total Army's modernization strategy is based on the concept of a "high-low" mix in capability for its equipment, as shown below. The Army cannot afford to modernize across the board, all at once. Rather, it must continue infusing reasonable quantities of the most modern equipment, as the threat requires and technology permits, while "product improving" older equipment. On the high side, we are building forces around proven and reliable new equipment such as the Abrams tank, the Bradley fighting vehicle, the Apache attack helicopter, and the Black Hawk utility helicopter. On the low side, we are "product improving" older equipment, such as the M60 tank, the M-113, and the Cobra and Huey helicopters, to prolong their service lives and extend their capabilities. These weapons systems still have a place on the battlefield and also reduce equipment shortages and fill war reserve stocks. Such a cost-effective approach allows us to keep pace with the threat, technological advances, and sustainability requirements.

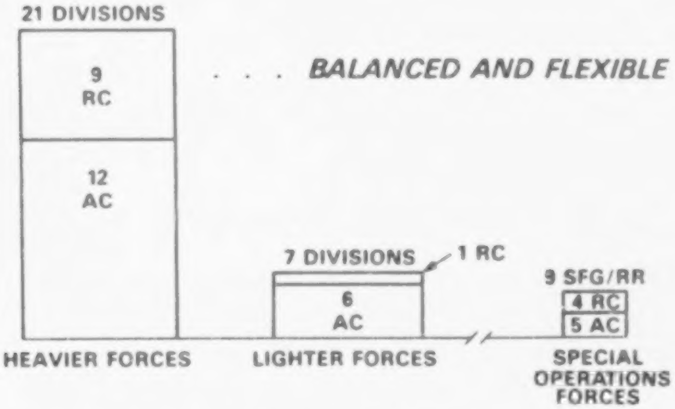


[CHART 8]

In this regard, research and development [R&D] is an investment that enables us not only to develop and capitalize on the "tiger of technology" but also to keep pace with a rapidly changing and sophisticated threat. We are driven by advances in technology, to a certain extent, and thus we can expect some continued turbulence in the weapons acquisition process. We must "product improve" our systems or risk defeat on future battlefields. The Army depends largely on superior equipment in the hands of well-trained and motivated soldiers to overcome a numerical disadvantage on the modern battlefield. R&D provides leverage for the future and is vital to the development of equipment that will allow us to capitalize on our airland battle doctrine.

As you can see, we are modernizing our force structure, giving it better balance, and increasing its combat power. All without an increase in the end strength of our active component. The following chart shows the major combat components of the total Army. Our heavier forces remain oriented toward Central Europe and the NATO commitment. Our lighter forces increase our strategic flexibility and deployability, and, thus, they enhance our ability to deter war. Deployability is deterrence. These light forces, along with our improved special operations forces, give the national command authorities the options needed to handle the challenges of low intensity conflict, the most likely we expect to face in the future. Army light and special operations forces will also play an important role in a high intensity war. For example, by holding heavily forested or urban areas, our rapidly deployable light infantry divisions can free up our tank and mechanized forces for offensive operations.

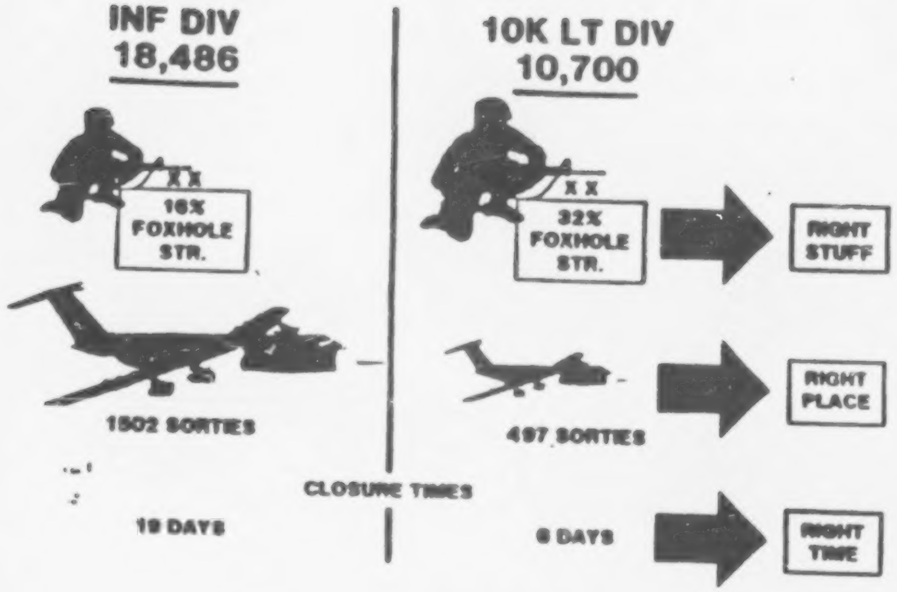
COMPOSITION – TOTAL ARMY



[CHART 9]

You can see that the Reserve components continue to play an important role in our force structure (10 of 28 divisions; they constitute 49 percent of our total strength, 50 percent of our combat battalions, 70 percent of our deploying forces, and 69 percent of our combat service support). They have substantially more equipment and simulators, take part in exercises with active forces overseas and in the United States, train at the national training center, and have sustained steady growth in full-time manning. The Reserve components have come a long way in improved readiness and capabilities.

Twenty-five percent of our total Army divisions are configured as lighter forces, including the newly organized light divisions. This chart shows the advantages of the light infantry division. Getting to the "right place, at the right time, with the right stuff," is a capability that enhances the deterrent power of the United States and adds to its strategic, non-nuclear capabilities.

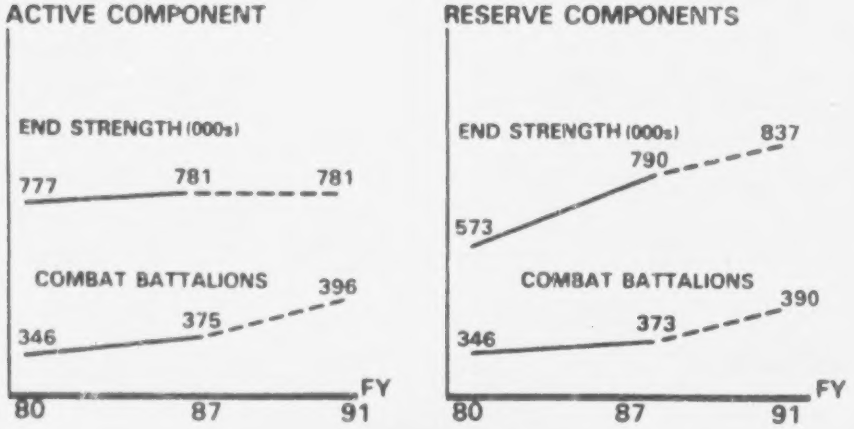


[CHART 10]

We remain vitally concerned abut the adequacy of airlift and sealift resources, and we continue to support fully the Air Force and Navy in their efforts to improve our strategic mobility.

Within the overall composition of the total Army, we have increased our combat capability as this chart shows. For the active Army, we have created 29 additional battalions through FY87, with 21 more programmed between now and FY91. This increase has been accomplished essentially within the confines of a constant end strength for the Active component. Also shown here is the increase in RC end strength and the growth in combat power in the Reserve components.

GROWTH OF COMBAT CAPABILITY



INITIATIVES

- *PRODUCTIVITY ENHANCING TECHNOLOGY*
- *ORGANIZATIONAL MODERNIZATION*
- *HEADQUARTERS REDUCTIONS*
- *RESERVE COMPONENT GROWTH*
- *CIVILIAN SUBSTITUTION, CONTRACTING*
- *HOST NATION SUPPORT, CONTINGENCY CONTRACTING*

[CHART 11]

We have chosen to keep the end strength constant for active component forces in order to protect our readiness, sustainability, essential modernization, and people programs. We have disciplined our appetite for active end strength increases so that we can maintain the overall quality of our forces and capitalize on productivity enhancing technology. But we are increasing our Reserve and National Guard strengths to permit more qualified citizens to serve their country and to improve our deterrent posture. This fundamental choice has been a key part of our strategy for building and equipping today's Army.

The substantial increase in our deterrent and combat capability shown on the last chart was accomplished through several initiatives: productivity enhancing technology, organizational modernization, headquarters reductions, Reserve components' growth, civilian substitution and contracting, and host nation support and contingency contracting. Technology is especially important to our efforts to conserve manpower and convert it to combat power. This chart provides a good example of how technology will help us to improve our support bridging capability in the early 1990's. With acquisition costs equal to the older model, the new bridge saves manpower, transportation, weight, and time. The crew will be reduced by 75 percent, the vehicles by 60 percent, and erection time by 75 percent.

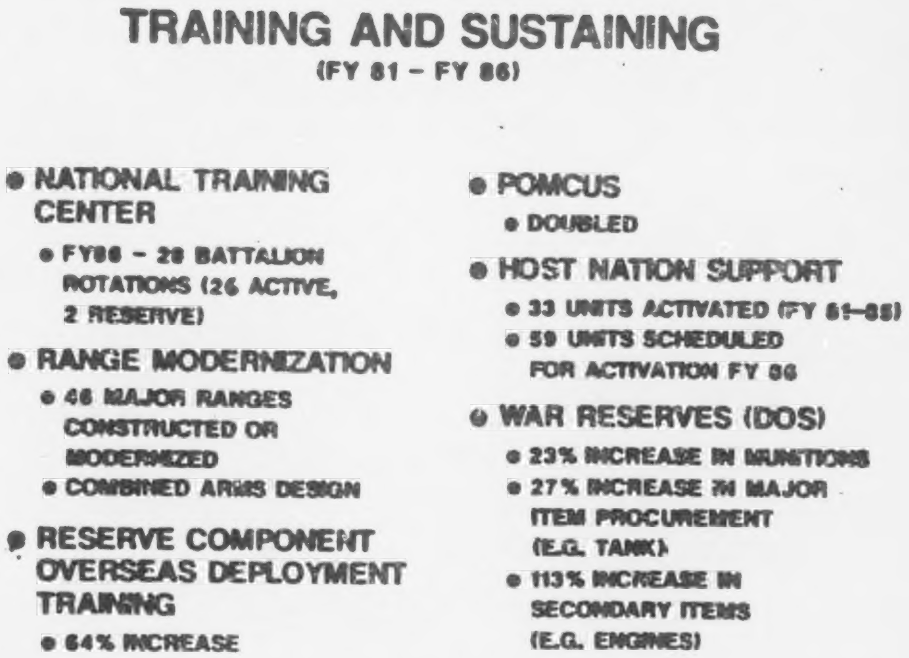
PRODUCTIVITY ENHANCING TECHNOLOGY

HEAVY DRY SUPPORT BRIDGE

CHARACTERISTIC	TODAY	TOMORROW
SPAN CAPABILITY	153 FT	180 FT
CREW SIZE	33	6-8 (TRUCK CREW)
TRANSPORTATION REQUIRED	7 TRUCKS 7 TRAILERS	3 TRUCKS
WEIGHT	40 TONS	22 TONS
BUILD TIME	3 HRS	45 MIN
ACQUISITION COST	EQUAL	EQUAL

[CHART 12]

In the areas of training and sustaining, the chart below shows some of the improvements made to enhance our readiness. National training center (NTC) rotations, range modernization, and Reserve components overseas deployment training provide superb training experiences for our soldiers and units. The improved status of POMCUS (prepositioning of materiel configured to unit sets), host nation support, and war reserve stocks will enhance our reinforcement capability and will help sustain our forces once they are committed to combat. This latter area, although less glamorous, has not been neglected in the course of building a renewed posture of readiness for the Army.



TRAINING AND SUSTAINING

(FY 81 – FY 86)

- NATIONAL TRAINING CENTER
  - FY86 – 28 BATTALION ROTATIONS (26 ACTIVE, 2 RESERVE)
- RANGE MODERNIZATION
  - 46 MAJOR RANGES CONSTRUCTED OR MODERNIZED
  - COMBINED ARMS DESIGN
- RESERVE COMPONENT OVERSEAS DEPLOYMENT TRAINING
  - 64% INCREASE
- POMCUS
  - DOUBLED
- HOST NATION SUPPORT
  - 33 UNITS ACTIVATED (FY 81–85)
  - 59 UNITS SCHEDULED FOR ACTIVATION FY 86
- WAR RESERVES (DOS)
  - 23% INCREASE IN MUNITIONS
  - 27% INCREASE IN MAJOR ITEM PROCUREMENT (E.G. TANK)
  - 113% INCREASE IN SECONDARY ITEMS (E.G. ENGINES)

[CHART 13]

JOINTNESS

"Jointness" is vital to success in combat. If we had to go to war tomorrow, we would go jointly. I can tell you that the Army, by virtue of its business, has to be the most joint of the services. General Gabriel, the Air Force Chief of Staff, and I instituted the joint force development process in May 1984 by memorandum of agreement. The objective remains to develop complementary rather than duplicative capabilities, to fill voids in our warfighting capabilities, and to increase total force effectiveness in direct support of the warfighting commanders in chief. We have broadened participation in the process to include the other services.

JOINT FORCE DEVELOPMENT PROCESS

- ORIGINAL 31 JOINT INITIATIVES
  NOW 35-OVER 50% IMPLEMENTED
- ARMY, NAVY AND AIR FORCE PARTICIPATE
- DIRECT SUPPORT TO THE COMBATANT CINCS
- COMPLEMENT RATHER THAN DUPLICATE CAPABILITIES
- INCREASE TOTAL FORCE EFFECTIVENESS
- $1 BILLION COST AVOIDANCE

[CHART 14]

We have implemented over half of the original thirty-one Air Force-Army initiatives and have added four new ones. The initiatives have resulted in roughly a billion dollars of near-term cost avoidance as we have reduced or eliminated duplicative programs. Furthermore, they are helping the Army and the Air Force to develop doctrinal and procedural agreements that lead to better operations on the battlefield. Similar agreements with the Navy are helping to improve our strategic sealift and logistics-over-the-shore capabilities.

This chart shows several systems, comprising the joint interdiction program, that are particularly important to our joint efforts: joint surveillance and target attack radar system, joint tactical fusion program, and the joint tactical cruise missile system. These three joint programs are critical to the future success of our airland battle doctrine and are essential to NATO's FOFA strategy.

JOINT INTERDICTION PROGRAM

			RDTE — $M	
			FY85	FY86
FIND THEM ----------	JSTARS	ARMY	50	44
		AF	50	152
ANALYZE THEM -----	JOINT TAC FUSION	ARMY	73	187
		AF	11	27
KILL THEM -----------	JTACMS	ARMY	CLASSIFIED PROGRAM	
		AF		

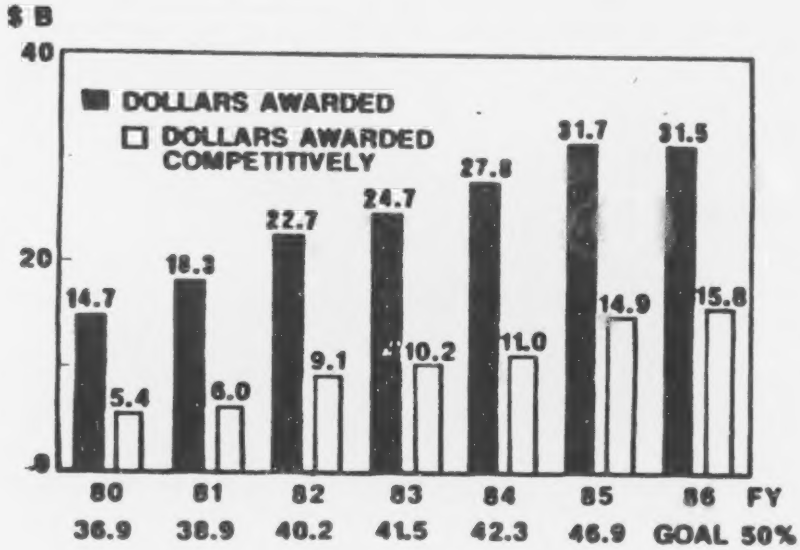
MAKES AIRLAND BATTLE WORK

[CHART 15]

STEWARDSHIP

As we have improved our military capability in terms of people, equipment, force structure, training, and support, we have been better stewards of the resources entrusted to us. For example, the chart below shows how we have increased competition in the procurement process. In FY85, we exceeded our goal of 46 percent of dollars awarded competitively, and this year, FY86, we are aiming for 50 percent.

COMPETITION PERFORMANCE



[CHART 16]

Another example involves multiyear procurements and reduced costs (actual or estimated) from FY82 to FY87. These efficiencies are driven by competition and are substantial as shown below.

MULTI-YEAR PROCUREMENT

	REDUCED COSTS ($M)
FY 82	
BLACKHAWK AIRFRAME, M1 FIRE CONTROL, AN/ALQ-136 RADAR JAMMER	273
FY 83	
T700 ENGINE, MLRS, M60 TANK THERMAL SIGHT, BFVs COMPONENTS, PLRS, HMMWV	594
FY 85	
SHOP EQUIPMENT CONTACT MAINTENANCE, BLACKHAWK AIRFRAME, BFV TURRET DR, 5 T TRK, CH-47D MOD.	401
FY 86	
T700 ENGINE (ARMY ONLY), M1 TANK ENGINE, M1 TANK CHASSIS, M1 FIRE CONTROL, BUSHMASTER 25MM GUN, BFV TRANSM., AH-64 APACHE PENDING	1,067
FY 87	
PATRIOT, STINGER	477
	2,812

[CHART 17]

Simulators also lead to efficiencies as well as substantially improved training. This chart shows the reduced costs we realize from our aircraft and tank training simulators.

SIMULATOR EFFICIENCY

AIRCRAFT	COST OF SIMULATOR	REDUCED COSTS PER YEAR	PAYBACK PERIOD
UH-1	$ 2.5M	$6.1M	.4 YRS
UH-60	$10.6M	$5.2M	2.0 YRS
AH-64	$22.5M	$8.1M	2.8 YRS
AH-1	$15.1M	$2.9M	5.2 YRS

TANK	COST OF SIMULATOR	REDUCED COSTS PER YEAR (AMMUNITION)	PAYBACK PERIOD
105 MM (M60 SERIES & M1)	$2.2M	$.3M	7.3 YRS
120 MM (M1A1)	$2.2M	$1.8M	1.2 YRS

[CHART 18]

AREAS OF SPECIAL CONCERN

Now, I want to highlight some areas that are of special importance to the Army and its ability to execute the missions entrusted to it.

AREAS OF SPECIAL CONCERN

- **BRADLEY FIGHTING VEHICLE**
- **LIGHT HELICOPTER FAMILY**
- **AIR DEFENSE**
- **SPECIAL OPERATIONS FORCES**
- **CHEMICAL WEAPONS**

[CHART 19]

First, the Bradley fighting vehicle [BFV] remains an indispensable part of our combined arms team and is essential to our modernization programs. The BFV's agility and firepower provide the required complement to the Abrams Tank for Airland Battle Operations on the high intensity battlefield. Incidentally, all major armies of the world have infantry fighting vehicles designed to protect infantry from artillery fragments and small caliber weapons, and have mounted on them antitank weapons as well as cannons for suppressive firepower.

The results of our vulnerability tests show that the BFV is a tough, survivable vehicle far superior to its predecessor, the M-113, and to the Soviet BMP. As threats to its survivability increase, or as technology changes, we will "product improve" the vehicle, as we do with all our soldiers' equipment, if the improvements are cost effective. The product improvements we now plan for the BFV include a spall liner to reduce fragment damage and applique or active armor to defeat shaped charge attack. We estimate the cost at less than $75K per vehicle.

As our soldiers have demonstrated at the national training center, which is the best and most demanding combined arms training center in the world, the Bradley fighting vehicle has significantly increased the combat power of battalion task forces, giving them superior flexibility, security, and the added killing capability to deal with masses of enemy armored vehicles. For example, in one battle in the desert at Fort Irwin, a BFV unit detected and destroyed an enemy security zone force without slowing down. Several weeks earlier, an M-113 equipped unit spent several hours battling the enemy on a similar mission in the same location. Our soldiers want the Bradley fighting vehicle. The Army needs this vehicle if it is to achieve the full potential of the heavy forces combined arms team centered on the M1 Abrams tank, and if we are to avoid being outclassed on the high intensity battlefield. I urge you to give it your full support and continued funding.

Second, the Army's light helicopter fleet (OH-58, AH-1, and UH-1) in the 1990's will be almost 30 years old and will be vulnerable to the Soviet threat. Some product improvements have been made to the fleet to extend service life and improve capabilities, but unless we begin fielding a replacement fleet with "leap ahead" technology we shall be outclassed on the battlefield. That's why we need the LHX program. The objective is to develop, qualify, and competitively procure an affordable, supportable, and highly survivable advanced technology helicopter system that meets the operational requirements of the Army in the mid-1990's and beyond. The LHX will give us a lightweight, highly reliable, and easily maintained family of advanced helicopters.

Third, as you know, one of our major shortcomings is the lack of effective air defense in the forward battle area. The termination of the Divad program aggravated this problem, creating a void in our forward area air defenses. To protect our forward maneuver forces, we have developed a "forward area counter air concept" which provides a joint and combined arms solution to a rapidly growing air threat. On future battlefields, we will face in the forward area increasingly sophisticated and difficult to kill attack helicopters, fixed-wing aircraft, and drones. Our concept requires a mix of capabilities. These include a combination of new weapons, a fiber optics guided missile capable of killing helicopters behind hills, gun-missile systems, command and control improvements, and enhancements to existing weapons, including the tank, BFV, and artillery. Your support is needed to get the forward area air defense program underway. Otherwise the substantial investment we have made in the M1, BFV, and other modern capabilities will be at risk.

Fourth, the Army is firmly committed to the revitalization of its special operations forces [SOF]. Readiness of our active component SOF has improved, and Reserve component readiness is a priority action. The Army SOF modernization action program provides the basis for our effort with 74 issues that range from increased force structure through modernized communications capability, and improved sustainability. With respect to command and control of Army, SOF, we are developing a concept which would improve the coordination of all elements of the force in support of the war fighting commanders in chief. Additionally, the Army has initiated action among the Joint Chiefs of Staff to improve the overall military organization of our SOF.

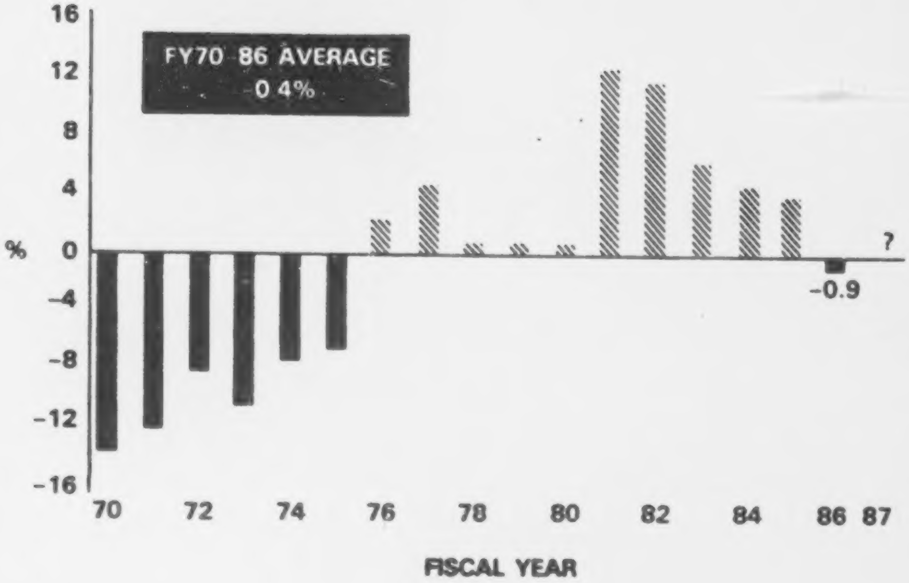
Fifth, we must continue to modernize our chemical weapons so that we can regain a credible deterrence capability and progress in efforts to ban chemical weapons altogether. Your demonstrated resolve in initiating this modernization effort last year has provided the impetus for what now appears to be a more serious interest on the part of the Soviets for pursuing treaty discussions. We must keep the pressure on. To that end, the Army has requested FY87 funds to continue to build binary production base facilities and produce binary munitions.

I have discussed the state of the total Army and highlighted areas that need special emphasis. Let me conclude by expressing my greatest concern: That we will fail to carry through with the Army's modernization programs.

This, we cannot do. We have come too far in the revitalization of our defense program over the last five years to abandon the gains made to date.

We have made much progress, but we are far from finished. Never before has so much been expected of our Army. The threats posed by the spectrum of conflict we face, ranging from terrorism to high-intensity conflict, are both diverse and difficult. We must apply sufficient resources to meet our security requirements. On this chart, you see the real growth trends for the Army since 1970. It does not show the potential impact of congressional action or the Gramm-Rudman-Hollings legislation on the 1987 budget, which compounds the problem.

ARMY REAL GROWTH TRENDS



[CHART 20]

Three significant factors emerge: One, we see a sinusoidal "rate of growth" curve rather than the steady-state growth condition. A steady-state condition obviously eases planning and execution, as we try to build Army forces, and allows more cost effective acquisition policies. Two, we have averaged "negative" real growth over this entire period, and, in fact, we "lived off the shelf" for most of the 1970's. Third, in recent years, we see again a negative trend in resources for the Army, with the effect of undercutting modernization, readiness, and sustaining capabilities. Quality of life for our soldiers and their families also will suffer.

This downward trend comes at a time when we are only midway in our modernization programs, contrary to the experience of the other services that started three to four years ahead of us. As of FY86, we will have been authorized to procure only two-thirds of the M-1's, Apaches, Black Hawks, multiple launch rocket systems, and Patriots that we need, and only one-half of the BFV's that we need. In fact, only one-third of our units are modernized with this new equipment.

We need the support of Congress and the American people to maintain the momentum of the progress made to date. The lessons of history tell us that strong, modern, conventional forces enhance deterrence and raise the nuclear threshold. With your continued support, today's Army will be ready, responsive, and responsible * * * now and in the future.

[The Posture Statement of the United States Army for fiscal year 1987 follows:]

AN ARMY OF EXCELLENCE:

READY, RESPONSIVE AND RESPONSIBLE

JOINT STATEMENT
BY
THE HONORABLE JOHN O. MARSH, JR.
SECRETARY OF THE ARMY
AND
GENERAL JOHN A. WICKHAM, JR.
CHIEF OF STAFF, UNITED STATES ARMY
BEFORE
COMMITTEES AND SUBCOMMITTEES
OF THE
UNITED STATES SENATE
AND THE
HOUSE OF REPRESENTATIVES
SECOND SESSION, 99TH CONGRESS

THE POSTURE OF THE UNITED STATES ARMY
FOR FISCAL YEAR 1987

U.S. ARMY MISSIONS:

- DETER AND, IF NECESSARY, DEFEAT A WARSAW PACT ATTACK ON NATO AND MAINTAIN ITS TERRITORIAL INTEGRITY AND SECURITY
- DENY SOVIET CONTROL OF THE PERSIAN GULF AND ASSOCIATED OIL RESOURCES
- DEFEND VITAL U.S. INTERESTS IN THE PACIFIC
- SUPPORT ALLIES IN ASIA, LATIN AMERICA AND AFRICA
- MAINTAIN A STRATEGIC RESERVE CAPABLE OF COUNTERING THREATS IN THE WESTERN HEMISPHERE;
- RESPOND TO OTHER THREATS TO U.S. INTERESTS ANYWHERE IN THE WORLD

PREFACE

The national military strategy of the United States requires an Army that can respond effectively to the full spectrum of threats faced by us and our allies. The Army ensures the attainment of our national security objectives by providing our Nation with a quality, modern, and ready military force. With the support of the American people through their elected representatives in Congress, we have made great progress in recent years. However, our work remains unfinished. The Army is only midstream in a modernization program that was long overdue. This effort is designed to make today's Army a responsive and relevant force well into the 21st century.

Continued support of the Congress is essential if we are to maintain the momentum of our progress. We must carefully balance our efforts to achieve federal deficit reductions with our requirements for national security. Peace with freedom is our ultimate aim.

This posture statement discusses the state of the Total Army, the challenges we must overcome, and the resources needed to perform the necessary tasks. We in the Army must provide sound, responsible leadership in the stewardship of resources entrusted to us. Though the costs are high to provide our Nation with that required quality force, the Army believes that the potential price of not maintaining the force is far greater.

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

JOHN O. MARSH, JR.
Secretary of the Army

JOHN O. MARSH, Jr.
SECRETARY OF THE ARMY

Mr. Marsh was sworn in as Secretary of the Army on January 30, 1981.

A native of Virginia, he was born in Winchester on August 7, 1926. After attending public schools in Harrisonburg, Virginia, he enlisted in the United States Army and was commissioned at the age of 19 upon graduation from OCS in 1945. He served with the United States occupation forces in Germany. Mr. Marsh is also a graduate of Parachute School and Jumpmaster School at Fort Benning and holds Senior Parachutist Wings.

In 1951, Mr. Marsh received his LL.B degree from Washington and Lee University, Lexington, Virginia. He was then admitted to the Virginia Bar and began law practice in Strasburg, Virginia.

A four-term Congressman from Virginia's 7th District, he served in the United States House of Representatives from 1963 to 1971 and was a member of the House Appropriations Committee.

In 1966, while a member of Congress, he volunteered and served a month's active duty with the U.S. Army in South Vietnam. Choosing not to seek a 5th term, he resumed the practice of law. He returned to Federal service in March 1973 as the Assistant Secretary of Defense for Legislative Affairs.

In January 1974, he became Vice President Ford's Assistant for National Security Affairs, then Counsellor, with Cabinet Rank, to President Ford. He held that position from August 1974 to January 1977.

After serving President Ford, he again returned to private law practice as a partner in the Washington, DC office of the law firm of Mays, Valentine, Davenport and Moore of Richmond, Virginia.

He served in the 116th Infantry Regiment, the 29th Infantry Division and the State Headquarters Detachment to the Virginia National Guard from 1951 to 1976, retiring with the rank of Lieutenant Colonel. Prior to his National Guard service, he was a member of the Army Reserve for four years. He also served for five years on the Board of Visitors to the Virginia Military Institute.

He has been awarded the Department of Defense Distinguished Public Service Medal, the American Legion Distinguished Service Medal, and the National Guard Distinguished Service Medal.

He is married to Glenn Ann Patterson. They have three children: Rob, Rebecca and Scot. Rob is a Captain in the United States Army Medical Corps stationed at Fort Eustis, Virginia. Rebecca is a high school teacher in Williamsburg, Virginia. Scot is a graduate of the Virginia Military Institute and a First Lieutenant in the Virginia National Guard.

GENERAL JOHN A. WICKHAM, JR.
CHIEF OF STAFF
UNITED STATES ARMY

General Wickham was born in Dobbs Ferry, New York, on 25 June 1928. He was commissioned a second lieutenant and awarded a Bachelor of Science degree from the United States Military Academy. He also holds a Master of Public Administration degree and a Master of Arts degree in Political Economy and Government from Harvard University. His military schooling includes the Infantry School, United States Army Command and General Staff College, Armed Forces Staff College, and the National War College.

He has held a wide variety of command and staff assignments, including 12 years in joint and allied headquarters. General Wickham has had three tours of duty with the Joint Staff, the last as Director. He served two Secretaries of Defense as Senior Military Assistant. His extensive overseas service includes six tours, two each in Germany, Korea, and Vietnam. During his last tour in Vietnam he served as deputy negotiator on peace treaty issues with North Vietnamese and Viet Cong military leaders.

He commanded an Infantry Battalion with the 1st Cavalry Division in Vietnam. In Germany he was a Brigade Commander and Division Chief of Staff with the 3d Infantry Division. He commanded the 101st Airborne Division (Air Assault) and deployed the division with most of its equipment to Europe for allied maneuvers in REFORGER 1976. During his last tour in the Republic of Korea, he was Commander of the Eighth United States Army and United States Forces, Korea; Commander in Chief of the United Nations Command with responsibility for enforcing the Armistice; and Commander in Chief of the ROK-US Combined Forces Command consisting of over 1/2 million military personnel. General Wickham left Korea and assumed the duties of Vice Chief of Staff, Army effective 17 June 1982. General Wickham became the 30th Chief of Staff of the Army on 22 June 1983.

His awards include the Defense Distinguished Service Medal (with 2 Oak Leaf Clusters), Army Distinguished Service Medal, Silver Star (with Oak Leaf Cluster), Legion of Merit (with 3 Oak Leaf Clusters), Bronze Star Medal with V Device, Meritorious Service Medal, Air Medal (11), Army Commendation Medal, Purple Heart, Combat Infantryman Badge, Expert Infantryman Badge, Parachutist Badge, Air Assault Badge, Secretary of Defense Identification Badge, and the Army General Staff Identification Badge. His foreign awards include the Republic of Korea Taegueg Medal, the highest Korean military decoration.

General Wickham is married to the former Ann Lindsley Prior. They have three children: Lindsley, John A., III, and Matthew.

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AN ARMY OF EXCELLENCE: READY, RESPONSIVE, AND RESPONSIBLE

The four very different wars that we have fought in this century have reaffirmed that wars are ultimately fought to control land, its people, and its resources. While all of the services have the capability to influence these elements of national being, only ground forces can exert decisive control over them. Furthermore, as essential equivalence in the nuclear realm shifts the burden of deterrence to conventional forces, landpower assumes increased importance as an element of U.S. national military strategy.

The lessons of twentieth century wars are doubly relevant for a future where we will be locked in permanent, multifaceted competition with the Soviet Union. The Soviet Union, with its captive allies and its proxies, is—in Churchill's phrase—"a land animal." Its ground forces are the dominant branch of service and all other services are designed, in varying degrees, to support the offensive operations of the ground forces. The Soviet Union, with its unique geostrategic position, can project powerful forces west into the NATO area, south toward the Persian Gulf, or east toward Northeast Asia, all areas critical to the well being of this nation and our allies. The Soviets can capitalize on a unique geographic location that enables them, if necessary, to undertake any or all of these operations without having to cross significant water barriers. Clearly, to deter or defeat a threat with these capabilities, the United States must rely heavily on its landpower.

THE THREAT: EXPANDING CHALLENGES ACROSS THE SPECTRUM OF CONFLICT

The primary threat to U.S. security today is posed by the Soviet Union. Soviet forces continue to expand, modernize and deploy increasingly capable weapons systems designed for the entire spectrum of strategic, theater-nuclear, and conventional conflict. Additionally, non-Soviet Warsaw Pact countries are expanding and upgrading their own forces to support Soviet military objectives. Although war with the Soviet Union and its Warsaw Pact allies could threaten the very survival of the United States, the likelihood of such a conflict today is low. The conflicts most likely to threaten our national security interests are those at the lower end of the spectrum of violence—terrorism and other low-to mid-intensity conflict. Increasingly, regional powers hostile to the United States are building destabilizing, modern military forces which threaten regional power balances and U.S. security interests. Given these complexities, the Army must be prepared to

SOVIET GROUND FORCES

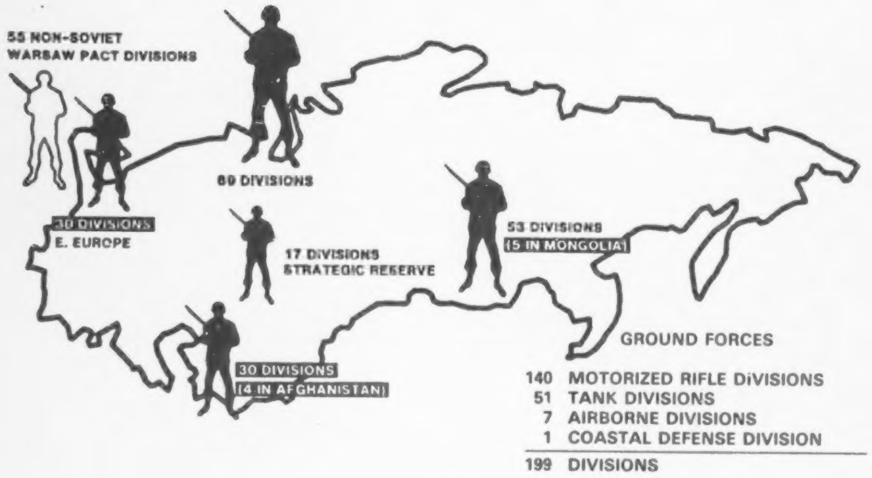


Figure 1.1

respond to the outbreak of nonnuclear or nuclear war with the Soviet Union and at the same time be prepared to meet diverse challenges along the remainder of the spectrum.

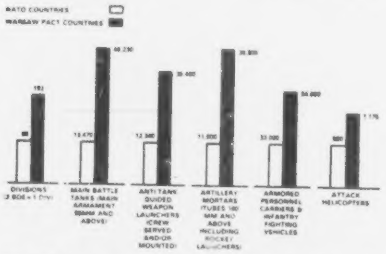
Soviet Forces. From a Soviet perspective, successful war in Central Europe demands the defeat of NATO as a military and political alliance. To accomplish this, the Soviet Union prepares to conduct a strategic operation in its western theater (Central Europe) under either nuclear or nonnuclear conditions. Even though the Soviets plan for nuclear war, they expect that the application of nonnuclear firepower and high-speed maneuver would quickly overwhelm NATO's forward defenses. High priority is placed on destroying NATO's theater nuclear assets at the outset so that NATO would not have the capability, through its remaining theater nuclear weapons, to alter decisively the outcome of the conflict. Authoritative Soviet military spokesmen emphasize that multiple front operations must be conducted with little or no pause. They advocate theater-level combined arms warfare conducted with a tempo that quickly and relentlessly overwhelms NATO. They envision simultaneous engagement of NATO forces from the front line to the depth of the theater in a single operation to achieve strategic victory.

In contrast, the Soviet General Staff of World War II thought in terms of phased operations requiring great effort, long pauses for preparation and renewed effort resulting in one campaign after another. The current concept stands in vivid contrast to that form of warfare. It reflects a comprehensive appreciation of military requirements in an era of increasingly critical technological considerations and changing perceptions of future battlefield needs. Soviet planners are becoming acutely aware that the potential of new technologies will increasingly shape future strategy and force structure.

Recent and ongoing force developments that enhance Soviet capabilities to conduct a successful theater operation in Central Europe include:

- Reorganization of air and air defense forces;
- Modernization of weapon systems;
- Refinement of the Operational Maneuver Group concept;
- Increased helicopter support;
- Increased artillery fire support at all levels;
- Comprehensive chemical warfare capability;
- Nuclear capable artillery;
- Improved short-range ballistic missiles;
- Continued growth of logistical capabilities;
- Improved command, control, and communications.

NATO-WARSAW PACT GROUND FORCE COMPARISON (IN PLACE IN EUROPE – 1984)¹



NOTES: WARSAW PACT DIVISIONS NORMALLY CONSIST OF FEWER PERSONNEL THAN MANY NATO DIVISIONS BUT CONTAIN MORE TANKS AND ARTILLERY, THEREBY OBTAINING SIMILAR COMBAT POWER.

WARSAW PACT TOTALS EXCLUDE THE 17 STRATEGIC RESERVE DIVISIONS IN THE MOSCOW, VOLGA AND URAL MILITARY DISTRICTS.

¹EXCLUDES FRANCE AND SPAIN

Figure 1.2

Regional Developments and Global Reality. Turning to geographic areas outside Europe, several trends have combined to create a global environment with unprecedented challenges to U.S. influence and global stability.

The first trend—already addressed—has been the Soviet military build-up which has relevance not only in Europe but in other contiguous regions such as South, Southwest, and Northeast Asia. Other trends of significance to U.S. national security interests are:

- Steadily improving Soviet power projection capability and continued activism in the Third World;
- The growing militarization of the Third World, characterized by fragile governments locked in regional rivalries and internal conflicts intensified by the growing quantities, lethality, and sophistication of weapons, to include chemical and biological weapons;
- The rise of terrorism world-wide.

A more detailed examination of these developments reveals a strategic environment which is measurably different and more dangerous than that the United States confronted as little as a decade ago.

PRODUCTION OF GROUND FORCES MATERIEL USSR/NSWP AND NATO*

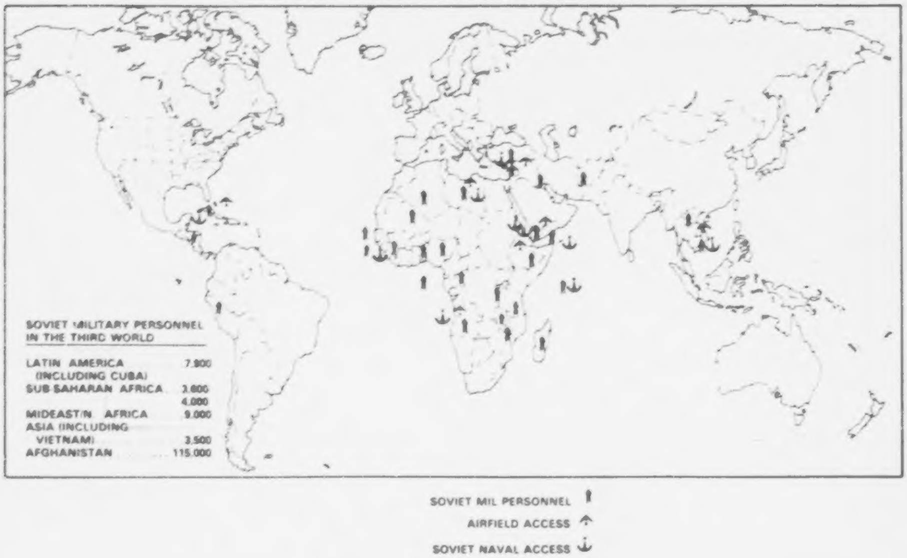
EQUIPMENT TYPE	1984 USSR	1984 NSWP	1984 NATO
TANKS	3,200	450	1,760
OTHER ARMORED FIGHTING VEHICLES	3,800	1,200	2,230
TOWED FIELD ARTILLERY	1,600	250	425
SELF-PROPELLED FIELD ARTILLERY	1,000	300	240
MULTIPLE ROCKET LAUNCHERS	600	100	80
SELF-PROPELLED AA ARTILLERY	50	0	40
TOWED AA ARTILLERY	—	225	50

*REVISED TO REFLECT CURRENT TOTAL PRODUCTION INFORMATION. INCLUDES UNITED STATES; EXCLUDES FRANCE AND SPAIN. NSWP IS NON SOVIET WARSAW PACT.

Figure 1.3

Improving Power Projection Capabilities. A major manifestation of the Soviet Union's global ambitions has been its steadily expanding presence and reach beyond Soviet borders. Increasingly, Soviet capability to project power is characterized by world-wide

SOVIET GLOBAL POWER PROJECTION



SOVIET MILITARY PERSONNEL IN THE THIRD WORLD	
LATIN AMERICA (INCLUDING CUBA)	7,800
SUB SAHARAN AFRICA	3,800 4,000
MIDEAST/N. AFRICA	9,000
ASIA (INCLUDING VIETNAM)	3,500
AFGHANISTAN	115,000

Figure 1.4

naval and air deployments; increasing numbers of military technicians and security advisors in the Third World; a growing global network of communications and intelligence collection sites; and the willingness of client states, most notably Cuba, to act on the Soviets' behalf in regional conflicts.

Growing Militarization of the Third World. A related phenomenon—one which reinforces regional instability—is the ongoing militarization of Third World nations. In virtually every region of the world, instability, underdevelopment, fragile governments, and regional rivalries persist. The world map is dotted with conflicts and simmering tensions. While these instabilities are not necessarily created by the Soviets, events have shown they often exploit internal tensions. The presence and activism of the Soviet Union and its surrogates provide opportunities to decrease U.S. influence and to diminish the prospects for the viability of democratic values.

Nowhere is the ongoing militarization more obvious than in the Middle East. The cost of these regional arms races has practically eliminated investment for economic and social development in some countries, thus perpetuating the underlying causes of instability. Even if these states cannot fully exploit the capabilities of the weapons they own, the potential consequences of militarization—the quicker resort to more lethal tools of violence—presents a sobering picture and an ominous trend for a United States committed to the defense of friends and allies in troubled regions.

Soviet and Cuban adventurism in Central America and the Caribbean basin has elevated the military importance of this sub-region. Today, Cuba's military is the second largest in Latin America, second only to Brazil. Rapid military buildup in Nicaragua, along the same pattern as Cuba, has already created significant military imbalance in Central America, an imbalance that likely will increase.

ACTIVE INSURGENCIES

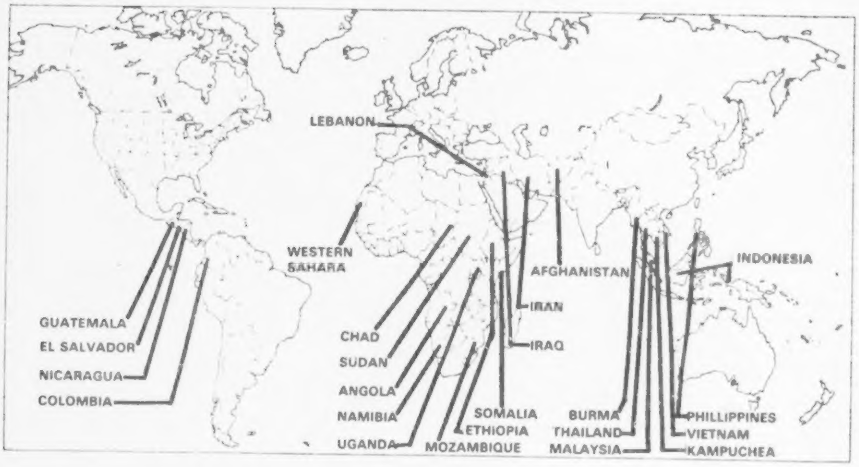


Figure 1.5

Africa will also remain volatile for the foreseeable future. Internal antagonisms and perennial regional tensions occasionally will flare up in violence, frequently without warning or from unexpected quarters. This volatility continues to threaten the development of viable and stable social and economic systems.

In Asia, Vietnamese expansionism, supported by the Soviets, threatens our friends, especially Thailand. The potential for conflict on the Korean peninsula remains and Philippine instability is a major concern. Furthermore, the Soviet's significant naval and air presence at Cam Ranh Bay, Vietnam enhances their operational capabilities in the South China Sea, Indian Ocean, and eastern Pacific Ocean, and the island nations they contain.

Terrorism. The rise of international terrorism has become one of the more immediate challenges to U.S. interests and our military forces around the world. Because of the publicity such attacks draw, U.S. military personnel and installations likely will continue to be terrorist targets. Despite limited successes that some governments have scored in combating terrorism, the number and lethality of international terrorist incidents continue to increase.

In addition, some governments are using terrorist tactics, employing terrorist groups, or exploiting terrorist incidents as a mode of surrogate warfare. Terrorism's attraction for these governments is that it allows them to pursue destabilization efforts as an alternative to open, armed conflicts. Thus, it gives them disproportionate influence over international politics that they could not acquire conventionally.

Summary. The range of threats for which the Army must prepare is wider and greater than at any time since World War II. Although general war is the least probable form of conflict today, its consequences would be the

MAJOR SOVIET EQUIPMENT DELIVERIES 1980-1984

	NEAR EAST AND SOUTH ASIA	SUB-SAHARAN AFRICA	LATIN AMERICA	EAST ASIA AND PACIFIC	TOTAL
TANKS/SELF-PROPELLED GUNS	3,160	500	405	320	4,385
LIGHT ARMOR	5,640	770	195	230	6,835
ARTILLERY	3,590	1,860	775	310	6,535
MAJOR SURFACE COMBATANTS	21	4	4	3	32
MINOR SURFACE COMBATANTS	23	17	38	41	119
SUBMARINES	5	0	2	0	7
MISSILE ATTACK BOATS	16	9	6	6	37
SUPERSONIC AIRCRAFT	1,360	305	135	205	2,005
SUBSONIC AIRCRAFT	105	5	0	10	120
HELICOPTERS	585	140	80	75	880
OTHER COMBAT AIRCRAFT	200	65	30	70	365
SURFACE-TO-AIR MISSILES	7,480	545	920	350	9,295

Figure 1.6

most disastrous. More probable contingencies are regional conflicts in the Middle East, Asia, or Latin America. At a time when the United States has relatively fewer resources and greater commitments, we face a world scene where U.S. interests are likely to be threatened increasingly by low-intensity conflict, terrorism, and by a powerful adversary bent on global dominance.

In addressing threats to our national interests, the United States must remain mindful of its national purpose and its values as a democracy and the leader of the Free World. In seeking to counter the threat, we must mirror neither the Soviet Union's authoritarian policy nor its aggressive goals. Furthermore, we need not mindlessly mimic their spending priorities or individual armament programs. Rather, to foster our values and protect our interests, we must carefully and efficiently build balanced forces to address specific threats and to meet the challenges of a changing world.

THE RESPONSE: BALANCED FORCES TO MEET A CHANGING WORLD

Landpower. The United States creates landpower through the joint effort of all services; but, the Army is charged specifically to organize, train, and equip forces to conduct prompt and sustained combat operations on land. To accomplish this mission, the Army designs and builds forces based on requirements of national military strategy, assessments of rapidly changing threats, and the expressed needs of the warfighting commanders. The result is an Army that provides the nation with an essential capability *to deter* wars before they start, *to control* wars if they do start, and *to terminate* wars on terms favorable to U.S. interests.

In the role of peacetime presence, deployed Army forces are the nation's clearest, most highly visible symbol of commitment. Furthermore, in an era when the strategic and theater nuclear balance has decreased the ability of both sides to threaten credibly the use of nuclear weapons, healthy ground forces have taken on an especially important role in the deterrence of all types of conflict. They are the ultimate symbol of American will, the centerpiece of flexibility in a flexible response strategy, an indispensable tool to escalate or deescalate a conflict, and a highly visible deterrent to an adversary's adventurism.

To deter or deal with conflict today, the United States must adapt to the nature of conflict in a world that has become more complex, more crowded, and more contentious. We must continue to uphold our vital interests in areas of traditional concern, such as NATO; and, recent history suggests we must also combat newer threats, such as terrorism, that may challenge our interests anywhere in the world. There are many more potential requirements than fiscal reality will support. Thus, we seek to provide a potent force, balanced to counter the most threatening eventualities, but flexible enough to meet other contingencies.

A number of important factors are shaping Army posture. First, the threat continues to grow in sophistication and extent. The high-intensity warfare threat requires capitalizing on our technological advantages to overcome quantitative weaknesses in our forces. The low- to mid-intensity threat which is more likely to challenge our national interests given the international situation we face, calls for development of rapidly deployable forces and special operations capabilities. Toward this goal, we are improving our force projection capabilities with light infantry divisions, special forces and ranger units. Second, our AirLand Battle doctrine builds on warfighting capabilities by emphasizing tactical and operational maneuver as well as firepower. Third, the Army continues to hold the active strength constant while increasing Reserve Component strength. Demographics as well as fiscal factors underlie this policy.

AirLand Battle doctrine draws on national strengths in the quality of our people and the innovativeness inherent in our society. In addition, it considers our national strategy and Soviet quantitative advantages and operational concepts. The success of AirLand Battle depends on our ability to adhere to its tenets: initiative, depth, agility, and synchronization. Existing Army programs lay the foundation to permit the execution of Army operations according to these tenets. Initiative is achieved through quick strikes, rapid maneuver, and massed firepower. Speed, maneuverability, and accurate, lethal systems are fundamental. Deep operations will extend the depth of the battlefield into the enemy's rear area, destroying and disrupting enemy reinforcements, command and control centers, and vital logistical nodes. Deep attacks will be essential to destroy Soviet timing and break the pace of relentless pressure against our defending Army. These operations will require tremendous agility and the ability to synchronize the efforts of our forces through improved battlefield intelligence, communication, and ability to react quickly to changing conditions. Rigorous training and initiative by both soldiers and leaders will be critical.

In the face of the expanding threats to U.S. interests, the development of forces that are more ready, lethal, and deployable is a strategic imperative for today's Army. The threats with a higher likelihood of incidence are at the lower end of the conflict continuum. As these forms of conflict require forces and equipment which are specially tailored, we have developed forces which are effective at this level, and also capable at other levels of conflict. In addition to expansion of Special Operations Forces, the light infantry division initiative is focused on these requirements. These divisions are specially tailored forces, designed to be quickly deployable, easy to sustain, and capable of vigorous combat. They contain a higher fighter to supporter ratio than other divisions, emphasize maneuver and infantry field craft skills, and possess enough organic tactical mobility to move one-third of their combat force by helicopter and ground vehicles in a single operation. Along with the light infantry initiative, we are pursuing other actions to increase the rapid deployability of Army forces. Where possible, we are lightening forces, equipment and sustainment needs to reduce sizes and loads for movement. Major prepositioning programs are continuing, enhancing our effort to shift major forces strategically in a timely fashion.

The Army must strike an appropriate balance among types of forces (heavy, light, and special), between U.S.-based and forward-deployed forces, between combat and support forces, and between Active and Reserve Components. Balance does not imply equal parts, but rather the achievement of optimal force ratios to meet our defense needs successfully. In conjunction with military support and assistance offered to other nations, the Army responsibly provides a balance in military capabilities to improve prospects for deterring and combating threats to U.S. interests both today and in the future.

MILITARY CAPABILITIES

The FY 87 budget provides for continued improvements in military capability. However, due to resource constraints, the momemtum established in the early 1980s will slow considerably, especially in modernization and sustainability. This slow down occurs at a time when our major potential adversary is making major qualitative improvements and continues to increase his enormous quantitative land force advantage. Without continued essential modernization and force structure improvements, our recent positive trend in risk reduction cannot be sustained. In addition, potential major reductions to the proposed FY 87 budget may be required under the provisions of the Balanced Budget and Emergency Deficit Control Act of 1985, known as the Gramm-Rudman-Hollings amendment. These potential cuts, combined with the extant cuts from the impact of Gramm-Rudman-Hollings provisions on the FY 86 appropriations, may have dramatic negative consequences on our deterrence and warfighting capabilities.

Military capabilities are commonly measured in terms of readiness, sustainability, modernization, and force structure indicators. In addition to these common measures, the Army's capabilities are influenced by factors such as jointness, stewardship and leadership. In each of these areas the momentum of the last several years will continue and the positive climate established by these initiatives will markedly influence the Army today and tomorrow.

Readiness. Readiness is the Army's top priority. The combination of new equipment, tough and realistic training, effective support, and the highest quality soldiers in the Army's history are visible evidence of the Army's improving readiness posture. Since 1980, 73 battalions and 44 additional companies have been modernized with new equipment. Range modernization and training device expenditures have increased over 500 percent. Training at the National Training Center has

expanded to and is now sustained at 28 battalions annually. Ninety-one percent of Active Army recruits are high school diploma graduates, up 36 percent; and 82 percent of Reserve Component recruits have high school diplomas. To achieve the goal to have all forward deployed and early deploying units in one of the two highest readiness categories within the next five years, the FY 87 budget reflects continued emphasis on readiness. However, resource constraints jeopardize the maintenance of the established pace. Emphasizing high payoff programs, the Army has focused readiness initiatives toward maintaining a quality, combat ready force, enhancing Reserve Component support, and continuing adequate support and operating tempos for both active and reserve training. Coupled with creative leadership and the use of training devices, the maintenance of adequate operating tempos ensures necessary training opportunities using the equipment with which the Army will fight.

Modernization. The core of the Army modernization effort is oriented toward providing the capabilities needed for AirLand Battle. While we have made great strides in fighting capability through modernization during this decade, in FY 87 the pace of equipment procurement will slow markedly. Essential modernization continues, but the reduced momentum in providing effective equipment for the modern battlefield has adverse implications for future capability. Effective stewardship through maintenance of economic production rates and existing multiyear procurements, coupled with an acquisition strategy to provide unit sets of new equipment to those most likely to be the first to fight, will continue. While this assures economic and militarily sound fielding of equipment, the reduced procurement momentum may signal the potential erosion of the Army's recent qualitative gains. The Army is midstream in its modernization of close battle forces and is only beginning to procure effective deep battle systems. The continued procurement of modern conventional systems is imperative for increased conventional capability and its concomitant deterrent ability. Chemical retaliatory capability through binary munitions, and air defense cover for front line forces are pressing needs. Consistent with the Reserve Components' increased mission requirements, initiatives to accelerate modernization of these vital forces continue. The importance of a strong technology base is manifest in the commitment to real growth in the Research, Development, Test and Evaluation account.

Force Structure. The Army is structurally sound and flexible. Designed to capitalize on the modern equipment being fielded and to employ the warfighting doctrine of AirLand Battle, the Army is structuring a 28 division force and expanded Special Operations Forces capability to meet the global requirements of today's strategic environment. With the continuation of the deliberate constraint on Active Army end strength, the reliance and emphasis on the Reserve Components is maintained. Moreover, force structure adjustments are being made to enhance the corps commander's capability to influence the operational level of war in accord with our doctrine and to improve our combat service support sustaining capabilities. Recent developments in the light force structure, exemplified by activations and conversions to the light infantry division design, have improved capabilities to respond rapidly to anticipated threats. They provide the National Command Authorities an essential degree of flexibility to respond rapidly and decisively in the critical first days of a crisis. These light force initiatives continue in FY 87 as the Army moves toward creation of five light infantry divisions. The heavier forces, primarily mechanized and armored divisions, continue to streamline their designs as they fill with modern, more capable equipment. The Army plans to complete conversion of these divisions over the next five years. Productivity enhancements allow the implementation of more effective service support structures for combat forces. The efficiencies from these changes translate into improvements in the "tooth to tail"ratio—the ratio of combat forces to support forces. This use of technology, coupled with improved administrative efficiency and reductions in staffs, has enabled the Army to increase combat power and improve combat service support capability without adding to active end strength.

Sustainment. Improved sustainment is the result of a combination of approaches to organization, equipment, and stockage. Efforts to provide more efficient and effective support systems and more durable equipment have received increased emphasis in recent years. Improvements from these efforts are beginning to be realized. Ammunition and petroleum transportation and distribution equipment are examples of improvements that increase capability and reduce manpower requirements. Allocation rules and workload factors for combat service support units have been reviewed and updated to ensure requirements reflect modern support capabilities. Examples include efficiencies obtained through implementation of the new Army Maintenance System and Logistics Unit Productivity Systems. The new units have increased capabilities and, therefore, have a greater ability to satisfy sustainment requirements. Furthermore, planned activations in the Reserve Components will nearly eliminate manpower shortfalls in combat service support units by the end of the decade. Even though modernization and force structure initiatives cause constant adjustment in war stockage levels, the progress of recent years in improving our war reserve stocks continues. However, the rate of build up will be slowed due to reduced procurement of munitions and spares. The Army continues progress toward achieving 80 percent of our munitions war reserve objective and 70 percent of our secondary items objective during the next five years.

Jointness. Cross-service cooperation or jointness, critical to warfighting, is essential to achieving maximum combat capability from the operative arms of military power—landpower, seapower, and airpower. By capitalizing on each service's inherent strengths, complementary rather than duplicative programs can enhance the overall capability of the services by efficiently filling voids in individual service capabilities while allowing each service to focus on what it does best. This results in near term cost avoidance and longer term improvements in warfighting effectiveness. The Joint Force Development Process provides the institutional framework for Army-Air Force initiatives. To date successes in these efforts have ranged from clarifying joint warfighting doctrine to avoiding over $1 billion in potential program costs. Similar agreements with the Navy in such areas as logistics-over-the-shore are also improving service capabilities. The Army has been at the forefront of cross-service initiatives and continues to lead efforts to expand and institutionalize jointness.

Stewardship. The most precious resources entrusted to the care and leadership of the Army are the soldiers who volunteer to protect the freedoms of the nation. Accompanying that trust is the responsibility to employ effectively and efficiently the other resources allocated to achieve the Army's strength and combat readiness. Stewardship of these resources encompasses actions that improve the quality of life for soldiers and their families, enhance productivity of soldiers and units, increase the efficiency of weapons acquisition, and provide effective operational systems to employ the talents of high quality soldiers.

Initiatives to standardize installation organization and, through decentralization, to encourage innovation in installation operations are improving productivity. Furthermore, continuing review of force integration plans identify potential problems early enough to initiate changes before they impinge on fielding and sustainability. Establishment of a Competition Advocate has assisted in increasing the percentage of competitively awarded procurement dollars to nearly 47 percent. Parallel to this initiative has been an increase in monitoring existing contracts for fraud, waste, and abuse. This effort has resulted in a substantial increase in debarments and suspensions as well as the recovery of over $3 million from contractors who defrauded the government. The Army is actively addressing and meeting the imperative to integrete quality soldiers, modern equipment, and sound operational concepts into effective deterrent and warfighting capability.

Leadership and Values. In recognition of the benefits positive leadership provides to the Army, the Army theme for 1985 was "Leadership." The theme of "Leadership" served to ensure that leaders and those they lead maintain a warrior spirit prepared to fight if called upon. Capturing the thrusts of previous themes—spirit, fitness, excellence, family, and leadership—the theme for 1986 is "Values." This theme serves to reaffirm our commitment to the values we are sworn to defend as well as the professional and personal values which support the Army way of life. This focus on leadership and values also highlights that the Army's most important asset is its people and good leaders and soldiers, steeped in the values that make this nation great, are the difference in war and in peace.

DIRECTIONS

As the Army moves toward the 21st century, solid directions have been established. Effective planning is essential to ensure that decisions made today give the Army capabilities to meet the future threat and execute the nation's military strategy. The Army is focusing on high leverage initiatives that will provide significant improvement in its warfighting capabilities. The Army will proceed along vectors that provide direction, focus and continuity during the remainder of this century. These vectors are:

- Provide quality soldiers in the Active and Reserve Components;
- Fight and sustain as part of joint and combined forces;
- Field a flexible, sustainable, modernized force to fight across the conflict spectrum;
- Exploit operational and tactical dimensions of AirLand Battle doctrine;
- Develop and exploit high technology and productivity enhancements;
- Improve tactical and strategic deployability.

The remainder of this statement explains our plans to accomplish our goals. In Chapter II we detail the structuring, manning, modernizing, training, deploying, and sustaining programs for the Army. The third chapter explains how we are providing stewardship for the resources given to our care. In Chapter IV we provide the long-term directions for the Army. The last chapter provides an overview of the FY 87 budget.

Fiscal Year 1987 offers the opportunity to continue, albeit at a slower pace, the momentum of previous years and to move forward in directions that assure the nation has landpower second to none. With the support of Congress and the American people, the Army will continue to build and maintain an Army of Excellence: Ready, Responsive, and Responsible.

TODAY'S ARMY: READY AND CAPABLE

Building a ready and capable Army remains the Army's first priority. The success of this effort is visibly evident in Army units, both Active and Reserve Component, that have better soldiers, more and better equipment, better training, and better support. Efforts are being taken to improve the management of equipment readiness. For example, using improved resource allocation programs, more than 144 units have been raised to a combat ready status. Furthermore, the influx of new high quality equipment and redistribution of older, but still capable equipment, is redressing some long standing equipment shortfalls. Despite these recent substantial improvements, challenges abound. Especially in an era of constrained resources, responsible efforts must continue to enhance Army readiness and capability.

Numerous initiatives are underway to create an Army which is more flexible in meeting its missions. The resulting force will be more effective, more easily deployable, and will have a more favorable tooth-to-tail ratio. The recent introduction of the light infantry divisions will enable the Army to respond quickly to a wide variety of threats throughout the world. To help develop this important initiative, the Army is finding innovative ways to reduce the support burden on the deployed force and to accomplish remaining tasks more efficiently. The Abrams tank and the Multiple Launch Rocket System are two examples of new systems which have resulted in a significant enhancement of our total force capability. They highlight the synergy of technology and sound doctrine that provides the qualitative edge to overcome quantitative disadvantages.

The Army relies more than ever before upon its Reserve Components (RC) to meet today's challenges and to counter tomorrow's threats. Our experience in many parts of the world clearly reinforces the importance of the reserves if the Army is to achieve its goal of deterring war. Focusing the Army National Guard (ARNG) and U.S. Army Reserve (USAR) on appropriate missions and providing them necessary support have made these forces better prepared to meet their wartime commitments today than at any previous time in peacetime history. Through their improved readiness they serve today as fully contributing partners in the Army's mission of deterring war.

The Capstone Program, which links RC units to a specific wartime mission and gaining command, is being used to improve RC planning, training, and resource priorities. The equipment status of some RC units has been accelerated using the "first to fight are first equipped" approach. Furthermore, later deploying units, primarily in the Guard and Reserve, need equipment to train on now. The Minimum Essential Equipment for Training (MEET) program, initiated in 1983, has been very successful in improving the ability of RC unit commanders to provide realistic training for their soldiers. The initial phase of this program identified approximately 500 units and 500 different types of equipment that were required. The training of over 300 of these units has been improved. This equipment was made available from planned procurement, existing stocks and redistribution.

The focus on recruiting and retaining high quality soldiers has been and will continue to be our best investment. Increasing the fill of Prepositioned Materiel Configured to Unit Sets (POMCUS) will further reduce deployment times and strategic lift requirements to reinforce Europe. Investments in simulations underscore our commitment to improve the quality of training, make maximum use of limited training time and real estate, and reduce the cost of training. The National Training Center serves as a prime example of how simulations can be used to improve training. Efforts to develop and capitalize on new technology, and to coordinate better with the other services to improve efficiencies and plan for "jointness" will further support the Army's efforts to make readiness first priority in a resource constrained environment.

All other efforts are wasted if we cannot sustain our forces once they are committed. Increases in war reserve stocks, medical support, water resupply assets, and the Individual Ready Reserve are some of the ways sustainability is being improved.

The foundation of our efforts to enhance readiness is the action being taken to foster good leadership throughout the Army. This effort involves more emphasis on professional schooling, more awareness of the operational art, and more attention to standards of performance. Good leaders will be effective stewards of the Army's readiness dollars.

Accurate, comprehensive assessments are necessary to determine our ability to execute operations plans; to provide insights into weakness in our ability to mobilize, deploy, fight, and sustain the force; and to show changes in capability over time. Efforts are underway to enhance capability assessment.

A new warfighting model which will better portray the deep battle, the battle in the rear areas, and the effects of logistics shortfalls is being incorporated into the Army's Operational Readiness Analysis (OMNIBUS), a key analytical tool for assessing total force readiness. A baseline methodology is being developed that will provide a measurement of capability independent of changes in the threat as well as capability including changes in the threat.

The Total Logistics Readiness/Sustainability Study is an annual comprehensive analysis that assesses the Army's current capability to sustain logistically forces deployed in support of its principal operational plans. This study, and the OMNIBUS development and warfighting analysis provide vital information about total force capability and possible enhancements.

Another key tool for assessing capability is the Measuring Improved Capabilities of Army Forces (MICAF) study. MICAF quantifies capability improvements in Army divisions, separate brigades and armored cavalry regiments. Since 1980, the capability of the Army's major combat units has increased 40 percent. Future MICAF enhancements will provide information on improvements needed to optimize capability and will assess the effects of budget decrements.

Through these initiatives, the Army is making great strides in its ability to assess its current capabilities and to undertake actions that provide the most effective ready force possible. Even though much work remains to offset long standing shortfalls, the improvements in Army capability have produced a force that stands as a visible symbol of this nation's deterrent posture and its resolve to protect its vital interests.

DOCTRINE FOR TODAY

In support of national military strategy, the Army must have doctrine that provides the basis for conducting operations across the spectrum of potential conflicts. Drawing on history and capitalizing on inherent advantages in technology, leadership, and quality soldiers, the recent evolution of the Army's doctrine has influenced everything from unit organizations through equipment design to soldier training.

The AirLand Battle. The Army's combat doctrine is called the "AirLand Battle." This doctrine reflects time tested theories and principles, and fundamental concepts about modern war. The AirLand Battle doctrine provides the bedrock for the structure of more specific "how to fight, lead, sustain, and train" concepts. Recent refinements reflect what we have learned during the past four years about AirLand Battle, clear up issues raised by allies and the other services, and reflect a stronger emphasis on joint and combined operations.

Forces, under AirLand Battle, will seize the initiative through a violent disruption-destruction sequence and then defeat enemy forces in detail. Relying on rapid seizure and retention of the tactical initiative, AirLand Battle seeks, through maneuver, to confront the enemy's engaged forces with unforeseen threats more rapidly than they can react to them, while simultaneously disrupting and destroying the reinforcing echelons upon which he depends for victory.

The Army seldom will fight alone. Since 1983, the U.S. Air Force has agreed to use AirLand Battle doctrine in conjunction with its Aerospace Operational doctrine as the basis for joint combat operations. When Army forces are deployed in allied or coalition operations, AirLand Battle doctrine is adaptable to allied political and military guidelines, procedures and operational plans. AirLand Battle is compatible and complementary to NATO's strategy and operational concepts to include the Follow-on Forces Attack concept for deep operations.

AirLand Battle doctrine is the central rationale that guides the Army's development of its forces to meet national security missions. Quality training, sound leadership, modernized equipment and a viable force structure, guided by AirLand Battle doctrine, will enable the U.S. Army to fight and win in combat world-wide.

Low Intensity Conflict Doctrine. The Army also is addressing the issue of Low Intensity Conflict (LIC) doctrine. The U.S. Army Training and Doctrine Command (TRADOC), as the executive agent for the Army, is coordinating a Joint Low Intensity Conflict Project which is examining the successes and failures in LIC operations to identify issues which will influence doctrine, training, materiel, and organization. These findings will serve as the basis for the LIC operations concept and doctrine.

Arroyo Center. The Arroyo Center, located in California, conducts broad, long-term policy analysis for the Army's leadership. The center is unique in that it addresses topics having major policy implications across the spectrum of Army activities. The center draws its analysis topics from the highest levels of Army leadership. Examples of major study topics are exploring the implications of space on Army operations, applications of robotics and artificial intelligence, and implications of low intensity conflict. Joint efforts include assessing the potential enhancement of conventional NATO defense as well as an examination of air defense with the Air Force.

The Army in Space. The Army has been involved in space-related developments since the 1940s. The first U.S. satellite was launched in 1958 by the Army. In 1961 the Army's Redstone rocket put the first two Americans in space. The Army conducted the first successful Intercontinental Ballistic Missile intercept in 1984, the first demonstration of nonnuclear kill in space of a reentry vehicle. In 1973, the Army initiated service and defense agency efforts to exploit nationally controlled satellite systems to support operational and tactical commanders.

While there is a shortfall in the availability of fully qualified personnel to fill the rapidly expanding requirements for Army space-related expertise, a concerted effort has been undertaken to ensure a pool of qualified officer and civilian personnel exists to meet requirements. The Army must continue to ensure that its needs for support of the AirLand Battle are incorporated during development of joint-service and DOD space systems.

STRUCTURING THE ARMY

In response to a broadening spectrum of threats, today's Army has been restructured to capitalize on technology and to employ the AirLand Battle doctrine in diverse and distant geographic settings. This effort has resulted in the creation of a balanced force of heavy, light, and special operations units streamlined to execute AirLand Battle doctrine. The Army is organized to employ the modern equipment now coming on line, to sustain that equipment on the modern battlefield and to capitalize on productivity enhancing technology. This restructuring has been accomplished within a deliberately fixed Active Component (AC) end strength because of national demographic considerations and the need to have a reasonable portion of our constrained resources committed to force modernization, readiness, and sustainability requirements. As a result, we have integrated RC units with the active force to a degree unprecedented in recent history. The Total Army is a fact.

As of September 1987, the Army force authorizations mix by percentage of combat function is programmed to be:

	Active Army	National Guard	Army Reserve
Combat	49	44	7
Support	48	19	33

By percentage of function within each component:

	Active Army	National Guard	Army Reserve
Combat	52	71	19
Support	48	29	81

The Corps. The corps is the Army's largest tactical organization. Usually subordinate to field armies or army groups, the corps will be the primary instrument for achieving operational objectives and it will fight to win battles. Corps' ground operations must be closely synchronized with supporting air operations and theater sustainment operations. Depending on circumstances, it may exercise tactical and operational level responsibilities.

AirLand Battle doctrine places increased responsibility on the corps commander to integrate the major operations (close, deep, rear) of the battle. The overall structure of the corps is being redesigned to provide the corps commander the assets necessary to fight, control and sustain simultaneously three separate operations. The proposed revisions of the corps structure are based on the combat capabilities and sustainment requirements of the redesigned divisions and upon prudent assumptions where division and separate brigade designs are not yet complete. The alternative corps designs incorporate the following changes:

- Increase the capability of the corps signal brigade;
- Transfer division Chaparral and add Hawk battalions to the corps air defense artillery brigade;
- Strengthen the corps military police brigade;
- Provide human intelligence capability within the corps;
- Transfer of 8-inch field artillery cannons to the corps, convert cannon artillery battalions to three 8-gun batteries;
- Add a Mutiple Launch Rocket System (MLRS) battalion and a target acquisition battalion with remotely piloted vehicles to corps artillery;
- Add attack helicopter battalions to the corps aviation brigade.

Refinement of Heavier Force Designs. Army design models provide for an armored division of about 16,800 members (6 tank, 4 mechanized infantry battalions) and a mechanized infantry division of approximately 17,100 (5 tank, 5 mechanized infantry battalions). The design retains the increase from three to four in the number of tank and infantry companies assigned to maneuver battalions. These companies are being equipped with the Abrams tank and Bradley Fighting Vehicle. The division support command provides a forward support battalion to each brigade and a main support battalion within the division rear area. A long range surveillance detachment has been placed in the divisional cavalry squadron. Infantry squads and 155mm howitzer sections have been reduced to nine men each. The 8-inch howitzer batteries have been moved to corps and a battery of MLRS has been retained as a divisional general support weapon. During FY 87 heavy forces in both Europe and the Continental United States (CONUS) will continue conversion to the refined unit designs as associated new equipment is fielded and facilities become available. Reserve Component affiliation with selected units continues, with roundout units converting to new unit designs about the same time as their associated AC unit.

The modern design for the 2nd Infantry Division in Korea was approved in May 1985. The new design considers the unique requirements for this forward deployed division and provides increased firepower through the use of modern equipment while staying within required space authorizations.

The 9th Infantry Division was tasked to develop innovative tactics and equipment that would evolve for use in a new type division. In September 1985, the Army leadership approved an interim design for a motorized division. This design includes three infantry brigade headquarters, five heavy combined arms battalions, two light combined arms battalions, and two light attack battalions. The division also includes a combat aviation brigade. The division's tactics and equipment emphasize high tactical mobility combined with extensive firepower. However, the division retains strategic mobility more comparable to the light division.

Organization of the Lighter Forces. In FY 87 the Army will continue the process of creating more deployable, relevant lighter forces. The activation and conversion to five light infantry divisions—four in the AC, one in the ARNG—continues. Both the air assault and the airborne division will complete conversion in FY 87.

The 7th Infantry Division (Light) completed its conversion to the light infantry design in FY 85, and in FY 86 undergoes a year-long certification. The 25th Infantry Division in Hawaii is converting to the light infantry design in FY 86. Lessons learned during the conversion of the 7th Infantry Division (Light) will be applied to the other light divisions' conversions.

The 10th Mountain Division (Light Infantry), which was activated as a new division in FY 85, continues its growth in FY 86 and FY 87. The pace of growth will be determined by the availability of facilities, particularly family housing, at Fort Drum, New York. During FY 86, the 10th will continue building its combat structure by activating two infantry brigade headquarters, four infantry battalions and one field artillery battalion. Additions to the combat service support structure begun in FY 85 will continue. One of the division's infantry brigades will be stationed temporarily at Fort Benning, Georgia, until adequate facilities are available at Fort Drum in FY 89. The division will have the 27th Brigade of the New York Army National Guard as a roundout brigade.

During FY 86, the Army will activate an additional light infantry division in the active force and complete reactivation of another in the RC. The 6th Infantry Division (Light) will be activated in 1986 at Forts Wainwright and Richardson, Alaska. This new division is formed around the existing 172nd Infantry Brigade already stationed in Alaska. The 205th Separate Infantry Brigade, U.S. Army Reserve, headquartered in Minnesota will roundout the division. The division's primary mission will be the defense of Alaska. The 29th Infantry Division (Light), Army National Guard is the Army's tenth National Guard division.

Headquartered at Fort Belvoir, Virginia and based on the assets of the 116th Separate Infantry Brigade (Virginia) and the 58th Separate Infantry Brigade (Maryland), the division will complete its reactivation as a light division during FY 86.

In August 1984, the Army approved new force designs for the air assault and airborne divisions. The air assault division begins conversion to the new design in FY 86; the airborne division is scheduled to convert to the new design in FY 87. The airborne and air assault division structures are based upon the light infantry division force design modified to consider unique mission requirements and the need for specialized training. Both divisions will be more readily deployable with increased tactical mobility, possess improved reconnaissance capabilities, a broader range of communications assets, and organic nuclear, biological, chemical decontamination capabilities and smoke support.

Special Operations Forces. The Army provides highly specialized forces as part of the land force mission. Special Operations Forces (SOF) complement conventional capabilities across the conflict spectrum, but are uniquely suited for limited objective operations at the lower end of the spectrum. The Grenada operation in 1983 illustrates the flexibility of SOF working with conventional forces in responding to a destabilized political situation. Army Rangers seized control of the airport, secured U.S. citizens being held hostage, and evacuated the American non-combatants while maintaining pressure on the enemy until relieved by conventional Army forces. Other efforts by SOF included participation by psychological operations units and a 30 member USAR civil affairs unit which assisted in restoring community support functions. The operation demonstrated the major thrust of SOF strategic employment while displaying the Army's capability for force projection in support of U.S. interests. SOF (Special Forces, Rangers, civil affairs and psychological operations units, Special Operations Aviation) provide the National Command Authorities a cost effective, politically acceptable, and feasible means of responding to threats without incurring the liabilities of large, highly visible, and expensive conventional forces.

The continued revitalization of SOF is a high Army priority. The Army SOF Master Plan identifies requirements and guides the enhancement effort for the period FY 86-90. A SOF Modernization Action Program, approved in May 1985, serves as the guidance for Army SOF modernization. The plan outlines required corrective actions, sets milestones and assigns responsibility for resolving deficiencies.

During FY 86, the manning level of the Special Warfare Center will be increased. The 1st Special Operations Command (SOCOM) will be improved by activation of a support battalion, a signal battalion and increased manning levels in military intelligence units. Future force structure enhancements will increase the number of psychological operations, special forces, and special operations aviation units. Growth trends through the FY 91 projection are shown in Figure 2.1

The RC provide a substantial contribution to Army SOF. Fifty percent of the special forces and 90 percent of the psychological operations and civil affairs units are in the RC. Equipment modernization actions are planned to improve the warfighting capability of RC SOF. Mobilization requirements for some RC SOF units will be increased with additions being made in special call-up authority.

In May 1984, the Army and Air Force Chiefs of Staff agreed to an initiative that would transfer all SOF-rotary wing aviation support to the Army. Both services have worked to develop appropriate implementation plans that ensure national capability is maintained and to allow for growth in aviation capabilities to meet requirements better. The Army is planning to activate a Special Operations Aviation Brigade composed of both AC and RC aviation units. Because aviation support for SOF remains an important joint service responsibility, the Army and the Air Force will continue to improve their SOF aviation capabilities.

Security Assistance. Security Assistance (SA) is an integral part of the Army's ability to deter or respond to threats to U.S. interests. The Army supports SA as a principal tool of national security policy to strengthen regional

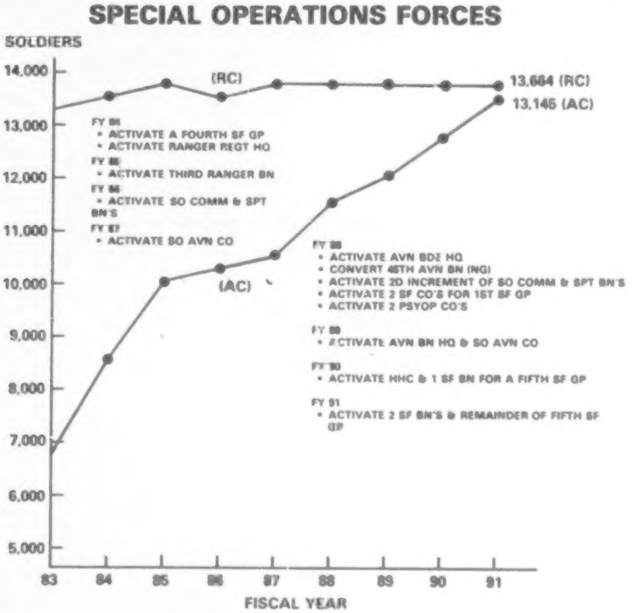


Figure 2.1

defenses. SA supports key friends and allies with nation building and self-defense resources and advice while preserving advanced technology and combat readiness.

As of the end of FY 85, there were approximately 6,400 open Army SA programs for equipment and services valued in excess of $44 billion, involving over 100 countries and international organizations (e.g., NATO, Organization of American States, etc.). The Army trained approximately 9,000 students in FY 85 and provided about 11,000 courses, about 98 percent of which were conducted in the United States. These training figures may decrease during FY 86 due to the reimposition of the four-tier pricing formula which substantially increases training costs for NATO countries as well as for those countries which do not participate in the International Military Education and Training program.

A key training vehicle is the United States Army School of the Americas. Its mission is to develop and conduct military training in Spanish, using U.S. doctrine, for Latin American personnel. The purpose is to achieve a higher level of military professionalism and to improve the effectiveness of military education and training in Latin America.

The School of the Americas began training and educating Latin American military personnel in 1947 at Fort Gulick, Panama. The School was moved from Panama in September 1984 to Fort Benning, Georgia. Fort Benning acts as a temporary site until a permanent site decision, expected in early 1986, is made.

The School's projected enrollment in FY 87 is between 24,000 and 28,000 student weeks of instruction, almost doubling FY 79 enrollments. This shows the value Latin American countries attach to the School. The School is an effective tool of our national policy and continued support for the School of the Americas will demonstrate to the Latin American community that U.S. commitment to the region is serious.

MANNING THE ARMY

Soldiers are the heart of today's Army. In recent years, efforts to recruit and retain quality soldiers have been successful as evidenced by the readiness and competency of our present force. However, the future demands that we keep pace with the accelerating changes in manpower requirements due to technological improvements in equipment, modernization of warfighting doctrine and streamlining of units in the force structure. Furthermore, to retain good soldiers, they and their families deserve a quality environment in which to serve and live.

The Army continues to upgrade the quality of the enlisted force and of the Noncommissioned Officer (NCO) corps, in particular, to meet the demands of the modern battlefield. The proliferation of new equipment, the adoption of a doctrine of warfare that emphasizes maneuver, and the importance of small units in low-intensity conflicts reinforce the wisdom of this effort. The Army fields systems in unit packages and employs doctrine to achieve the maximum lethality of these systems. For the Army to be effective, soldiers, equipment, and doctrine must be compatible. The quality of soldier cannot be diminished without affecting the performance of the weapons systems or the ability of units to execute the Army's warfare doctrine.

In FY 87 the strength of the Active Army remains stable. This, coupled with a slight decline in civilian strength, means we must restructure our existing manpower to accommodate modernization and integrate the modest strength increases in our Reserve Components (RC). Our challenge in meeting these changes is to ensure that soldiers are trained in new specialties, where appropriate, assigned to the right place at the right time, and that our people, both military and civilian, become more productive. The growth of COHORT (Cohesion, Operational Readiness, Training) units, designed to keep soldiers together for longer periods of time, will make a major change in the culture of the Army and will improve unit cohesion and overall readiness.

Although our enlisted recruiting and officer accession programs have met their numbers and quality goals, our future needs offer an even greater challenge. Based on an improved economy, continued demand for quality youth in the private and public sectors, to include the other services, and a decline in the youth population, the Army must continue to offer bonuses for selected skills and educational incentives for both the accession and retention programs.

About 58 percent of the force is married. As a result, the quality of life for soldiers and families remains a major readiness priority. The Army's Family Action Plan is designed to ensure improvements in all areas. Our goal is to shape a climate that fosters wholesome families and communities within an environment that recognizes the contribution our soldiers make to this Nation. Accordingly, we continue to promote the partnership between the Army and Army families and have identified many of their needs to accomplish this goal.

With the continued support of Congress we will succeed in our recruiting and retention efforts to build a quality Army today for tomorrow's missions throughout the world.

Total End Strength. The active military end strength remained at 780,800 for FY 85 and FY 86. This has been possible by an aggressive civilian substitution program, application of productivity enhancing technology, and transfer of appropriate missions to the RC. Army National Guard (ARNG) selected reserve strength increased from 439,952 in FY 85 to 450,496 in FY 86 and that of the U.S. Army Reserve (USAR) increased from the FY 85 level of 292,080 to 310,650 in FY 86. Through application of aggressive productivity programs and sound management techniques, the Army plans to reduce our civilian strength slightly in FY 86 and FY 87.

The Active Component (AC) strength will increase marginally to approximately 780,900 in FY 87. The Selected Reserve will continue an

TOTAL ARMY END STRENGTH

	FY 85	FY 86	FY 87
ACTIVE ARMY	780,787	780,800	780,900
ARMY NATIONAL GUARD	450,696	460,137	472,505
SELECTED RESERVE*	(439,952)	(450,496)	(462,800)
INACTIVE NATIONAL GUARD	(10,744)	(9,641)	(9,705)
ARMY RESERVE	593,905	629,558	663,727
SELECTED RESERVE**	(292,080)	(310,650)	(327,600)
INDIVIDUAL READY RESERVE	(301,825)	(318,908)	(336,127)
TOTAL MILITARY END STRENGTH***	1,512,819	1,541,946	1,571,300
CIVILIAN****	419,917	412,478	410,530

*INCLUDES ACTIVE GUARD/RESERVE.

**INCLUDES ACTIVE GUARD/RESERVE AND INDIVIDUAL MOBILIZATION AUGMENTEES.

***INCLUDES ACTIVE ARMY AND SELECTED RESERVE ONLY.

****INCLUDES RC TECHNICIANS COUNTED IN RC END STRENGTH ACCOUNTS.

Figure 2.2

upward trend with the ARNG strength increasing to 462,800 and the USAR strength rising to 327,600. Civilian strength in FY 87 has been adjusted for 2,500 ARNG Military Technicians and additional supply and maintenance manpower to comply with core logistics provisions described in the FY 86 Joint Authorization Conference Report. The civilian strength is programmed to remain relatively stable through the out years. This stability in active and civilian strength reflects efforts to improve output through productivity enhancing technology rather than increases in people.

Full-Time Support Program. Since announcement of the Total Force Policy in 1973, the Army has greatly increased the role of the RC. To achieve and maintain a level of readiness commensurate with this role, the ARNG and USAR require a cadre of highly skilled full-time support personnel to assist the part time members of the RCs in achieving their readiness goals.

Active Guard/Reserve soldiers, RC soldiers on active duty, and civilian military technicians, excepted civil service employees who hold a military position in the ARNG or USAR unit they support, are the two major personnel groupings found within the Full-Time Support Program. The unique characteristics of both categories are blended into the full-time unit support cadre of equipment operators, maintainers, trainers and administrators needed by units to achieve the high readiness standards demanded of them. Today's Guard and Reserve environment is characterized by increased mission responsibilities, intense training on high-tech equipment, and the pressure of a compressed deployment schedule that reduces the opportunity for post mobilization training. To be successful the commander must reap the maximum from the limited training time and facilities available. The full-time support force assists the commander in this effort by accomplishing the myriad essential support tasks that permit more mission related unit and individual training.

FULL-TIME SUPPORT STRENGTH

(ACTIVE GUARD/RESERVE (AGR) AND CIVILIAN TECHNICIANS (CT))

	FY85	FY86	FY87
ARNG			
AGR	21,059	23,731	28,721
CT	25,494	26,629	27,129
USAR			
AGR	10,751	12,157	13,657
CT	7,849	7,609	8,032
TOTAL	65,153	70,126	77,539

Figure 2.3

The requested increases in full-time support personnel strength will enable the Guard and Reserve to continue progress toward achieving and maintaining the unprecedented training tempos and capabilities now demanded.

Civilian Strength. The FY 86 Joint Authorization Conference Report extends the test which eliminates civilian strength ceilings into FY 86. This legislation increases significantly the Army's flexibility to manage civilian employment levels without the requirement to meet an arbitrary ceiling on the last day of the fiscal year. FY 85 strength data indicate that while total Army civilian employment grew by about 18,000, full-time permanent employment is below budgeted levels by about 6,800. This experience shows that the Army is using temporary hires to meet work load surges and that the full-time permanent work force is not growing in the absence of ceiling constraints. Had the Army been under an end strength ceiling for FY 85, the ceiling would have been met through the release of over 18,000 temporary hires which causes excessive administrative costs, personnel turbulence, and mission disruption. Estimated administrative costs avoided in FY 85 was $9.3 million.

A continuing initiative to ensure the best use of soldiers is the civilian substitution program. This program converts military positions to civilian, which releases soldiers for duty in essential combat, combat support, and combat service support units, and results in increased readiness. During FY 83-86, the Army converted 5,506 military positions to civilian. Civilian substitution will be further expanded by 3,003 in FY 87 with no growth in total civilian strength over planned FY 86 strength.

Officer Accessions. The goal of the officer accession system is to provide officers of the requisite quantity, quality and academic discipline to satisfy the requirements of the Active Army, Army National Guard, and U.S. Army Reserve. Officer accessions are provided primarily through four precommissioning programs—the United States Military Academy (USMA), the Reserve Officers' Training Corps (ROTC), the Officer Candidate School (OCS) at Fort Benning, Georgia, and State National Guard OCS programs. In FY 85, approximately 1,000 lieutenants were commissioned from USMA, 8,300 from ROTC, 1,000 from OCS, and 1,150 from the State OCS programs.

To assist in providing the Army a West Point graduate with the best, most up-to-date education available, the United States Military Academy has initiated an extensive facilities modernization program. The purchase and renovation of Ladycliff College, renamed New South Post, will free valuable classroom space in the central post area. Renovation will include modernization of classrooms, laboratories, and cadet room furnishings. Whether measured in terms of graduate academic honors or selection for critical positions of military responsibility, West Point continues to provide graduates who exhibit the values, skills, and motivation to lead the Army now and in the future.

ROTC has initiated several recruiting programs to enhance its ability to recruit and produce its officer requirements. They include the ROTC Scholarship Program, the Simultaneous Membership Program (SMP), the Viability Management Program, the Mission Management System (MMS), and the ROTC Advertising Program.

ROTC scholarships increased from 6,500 in school year 80-81 to the present figure of 12,000. Last year over 10,000 students applied for 1,450 four-year scholarships. The SMP is aimed at attracting and retaining ROTC cadets. In FY 85, 6,605 students were simultaneously enrolled in ROTC and assigned to RC troop units. The SMP program allows students to supplement their college income by drawing the pay of an E-5 while serving as an officer trainee.

To improve ROTC production, ROTC cadre are being redistributed to markets of high potential under the Viability Management Program. This program allows the disestablishment of non-productive institutions with a concomitant shift in cadre to more productive ones.

Improved retention, improved management and increased enrollments are necessary to increase the number of officers commissioned from ROTC. Key to the accomplishment of this strategy is the ROTC MMS which will automate enrollment data and allow ROTC to manage production better without increases in manpower. Increased ROTC advertising is required to minimize the drop in the ROTC enrollment propensity of college students.

Three major actions were taken in FY 85 to increase production, standardize training, and improve the distribution of reserve officers. Production of officers from ROTC was programmed to increase from 9,500 in FY 87 to 10,750 in FY 91. Active and reserve OCS programs were consolidated to improve reserve training and eliminate dual system inefficiencies. Finally, a lieutenant's management team was established at the Reserve Component Personnel Center to enhance the distribution of officers to the ARNG. All actions have been completed and are success stories.

Recruiting. The Army College Fund and Enlistment Bonus programs, as well as the two-year enlistment option and increased major media advertising, have contributed to the recruitment of higher Armed Forces Qualifications Test (AFQT) category youth over the last three years. High youth unemployment during FYs 80-83 and, to a lesser extent, FY 84 also contributed to the improved quality of Army accessions. Changes in these factors could influence our ability to man the force in the future.

Figures 2.4, 2.5, and 2.6 show the increased accession quality of the Army. In FY 85 each component of the Army was well within the congressionally mandated ceiling of 20 percent AFQT category IV recruits.

QUALITY OF ACTIVE ARMY ACCESSIONS

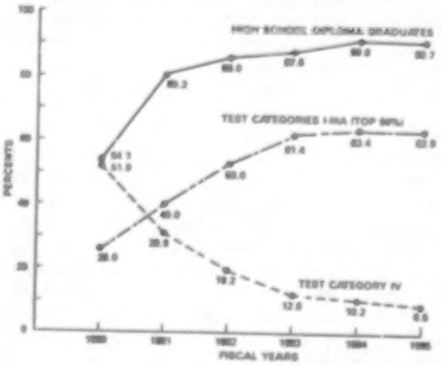


Figure 2.4

QUALITY OF ARNG ACCESSIONS

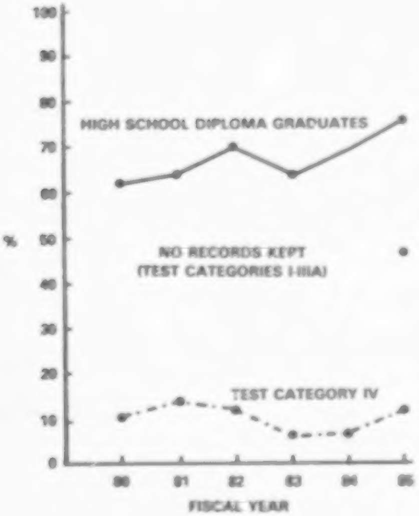


Figure 2.5

QUALITY OF USAR ACCESSIONS

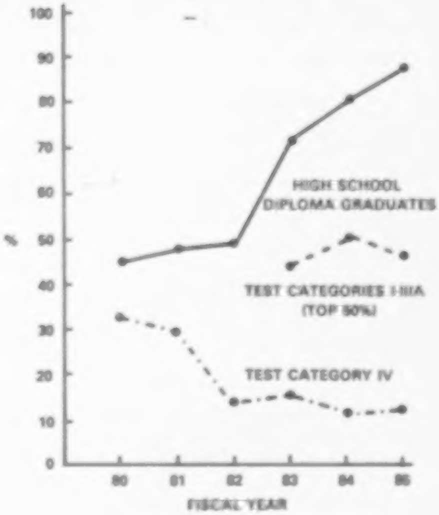


Figure 2.6

U.S. Army Recruiting Command and Army In-Service Recruiters (ISR) accomplished 101.5 percent of their combined mission with 78,862 Army Reserve Troop Unit accessions in FY 85. Additionally, the ISR enlisted 6,856 soldiers from the Individual Ready Reserve (137.1 percent of mission) and referred 20,430 separating AC soldiers to the ARNG for further recruiting (168.8 percent of mission).

The Army expects to maintain the quality content of our accessions during FY 86. Figure 2.7 shows goals in terms of numbers and quality.

To remain competitive in the quality recruiting market the Army uses enhanced educational incentives and enlistment cash bonuses to target qualified individuals for designated skills and/or units. With the potential pool of accessions declining, these incentives are a primary tool to attract, distribute and align quality accessions. The new GI Bill became effective 1 July 1985 and pays benefits of up to $10,800 for active duty personnel and up to $5,040 for Selected Reserve personnel. The Army is authorized to pay certain qualified enlistees additional educational incentives above the basic active duty benefit. These additional benefits are called the New Army College Fund. These "kickers" are $8,000, $12,000, and $14,400 for two-, three-, or four-year enlistments, respectively. Cash bonuses of up to $8,000 for a four-year active duty enlistment and up to $2,000 for a six-year Selected Reserve enlistment are also offered to qualified individuals who enlist in a designated skill and/or unit. The continuation of these incentives is necessary to ensure that the Army achieves its quality and total accession goals.

Reenlistment. Due to the improved quality of Active Army accessions over the last four years, the three-year attrition of first-term soldiers has declined. Army retention policy

TOTAL ARMY ENLISTED ACCESSION PLAN (000)

	FY 86			FY 87		
	ACTIVE ARMY	ARNG	USAR	ACTIVE ARMY	ARNG	USAR
NON-PRIOR SERVICE ACCESSIONS	127.0	47.5	26.1	128.4	51.0	30.0
PRIOR SERVICE ACCESSIONS	8.0	45.0	50.6	11.0	45.0	48.3
TOTAL	135.0	92.5	76.7	139.4	96.0	78.3
HSDG % OF NPS	90.0	75.0	85.5	90.0	76.0	86.5
TC I-IIIA % OF NPS	59-63	47.0	54.0	59-63	48.0	55.0
TC IV % OF NPS	10.0	10.0	10.0	10.0	10.0	10.0

Figure 2.7

focuses on retaining sufficient quality soldiers with leadership potential. However, adequate compensation is essential if the Army is to be successful in retaining high quality soldiers. Current retention trends are similar to those experienced in FY 85. Manpower requirements will be met only if the Army is successful in retaining a higher proportion of top performing soldiers. The new GI Bill contains provisions allowing Vietnam era GI Bill eligible soldiers to participate in the new benefits and remain eligible for all portions of their old benefits. The 1989 expiration date will not affect them. This provision will assist in the retention of career soldiers. However, quality retention may suffer should the recent adverse trend in pay comparability continue. Military pay now lags civilian earnings by 8.3 percent and unless the requested 4 percent raise in FY 87 is approved will likely lag further.

The Selective Reenlistment Bonus (SRB) program provides monetary incentives to soldiers who reenlist in critical skills. This promotes retention of qualified soldiers in order to sustain a trained experienced career force. The SRB is essential to promote reenlistment of proven quality soldiers in selected military occupations and improve force alignment.

The Special Duty Assignment Pay program compensates soldiers for extraordinary effort in the performance of demanding military duties which involve an unusual degree of responsibility and arduousness.

.The New Manning System. In 1981, the Active Army implemented a New Manning System (NMS) to improve combat effectiveness by reducing personnel turbulence and fostering unit cohesion, esprit and loyalty in Army units. The program consists of two major subsystems: COHORT (Cohesion, Operational Readiness, Training) Unit Replacement for the Active Army and the U.S. Army Regimental System (USARS). Initially, only the infantry, armor, and cannon field artillery combat arms were involved in the execution of the program. Combat support and combat service support arms have been integrated into the program where practicable and necessary.

Active Army COHORT unit replacement is under development to enhance combat effectiveness by reducing personnel turbulence in combat arms battalion and smaller size units. The concept is based on the precepts of stabilization and unit replacement to foster cohesion and efficiency of training resulting in improved combat readiness. First-term soldiers and career soldiers in battalion size and smaller units will be stabilized within the organization for three to five years. The long-term relationship fosters greater horizontal (peer) and vertical (chain of command) bonding within the unit. In addition, commanders have time to develop long-range training objectives for obtaining higher performance standards than currently attainable with an individual replacement system.

Through calendar year 1985, 122 company size and 13 battalion size units were activated. An additional 23 company size COHORT units will be activated in FY 86 to replace units reaching end-of-life cycle. During FY 87 the COHORT program will activate 16 companies and 11 battalions.

Emerging results of the comparative COHORT to non-COHORT evaluation reflect vastly improved stability (leaders and first termers serving together for a full three years) in COHORT units. The evaluation program will continue to identify the strengths and weaknesses of the COHORT unit replacement program. Comparison of COHORT to non-COHORT units will provide readiness and costing data for determining progress with the program and adjustments required to expand unit involvement on a deliberate growth path through Army-wide participation. The COHORT unit replacement program will remain consistent with recruiting missions, end strength ceilings, training base capacities and force modernization and structure compatibilities.

The USARS is designed to enhance combat effectiveness. Its framework provides the opportunity for affiliation, develops loyalty and commitment, fosters an extended sense of belonging, improves unit esprit, and institutionalizes the warfighting ethos. A regiment within the USARS is defined as a single or a group of like-type units designated with a unique regimental color and formed for the purpose of providing an affiliated soldier with an opportunity for long term identification, the potential for recurring assignments, and the basis to perpetuate history, customs and tradition.

Affiliation is the opportunity for a soldier to associate voluntarily with the regiment of his choice for purposes of career development and homebasing. The goal is for 100 percent affiliation of all Army officers, warrant officers, and enlisted personnel. Career-long affiliation is the desired goal but opportunity for change is built into the program.

There were 15 active combat arms regiments in the system as of FY 85. Plans for combat support and combat service support regiments have been developed and are being staffed for implementation. Currently there are plans for an additional 49 regiments being staffed for implementation during FY 86. The USARS is programmed for expansion through FY 92 to a total of approximately 180 regimental colors.

MODERNIZING AND EQUIPPING THE ARMY

We are in the midst of the largest peacetime modernization program in our nation's history. The difference in fighting capability between 1981 and 1985 is remarkable. Systems such as the Abrams tank, Bradley Fighting Vehicle (BFV), Black Hawk helicopter, Pershing II missile, Multiple Launch Rocket System (MLRS) and Stinger air defense missile are fielded now in sizeable numbers. Other key systems such as the Patriot missile system and the Apache attack helicopter are starting fielding and full production.

By fielding the modern equipment in a militarily sound manner, synergism and tactical potential on the battlefield is enhanced. For example, because Abrams/Bradley teams can move one-third faster and the equipment is better than previous equipment, field commanders can implement new tactical concepts and realize the potential of maneuver during operations. Equally important, soldiers who are completing challenging exercises with this equipment are immediately more confident and aggressive. The Army approach is to acquire its new equipment in unit sets to ensure units gain the full potential of the new equipment. If a unit equipped with the Abrams tank has to slow down because of inadequate support equipment our qualitative edge is diminished. The equipment is distributed in unit sets to the units likely to be the first to fight. As a result the Army has accelerated equipment modernization of the Reserve Components (RC) to enable units to train with equipment comparable with that of the Active Components (AC). The RC will receive approximately $2.1 billion worth of equipment in FY 87. Figure 2.8 shows recent trends.

RESERVE COMPONENT EQUIPMENT DISTRIBUTION QUANTITIES

	ACTUAL			PLANNED		
	FY 83	FY 84	FY 85	FY 86	FY 87	FY 88
M1 ABRAMS	63	60	120	0	0	60
M60A3	130	68	4	283	732	860
BRADLEY	0	0	79	94	158	0
AH1 S	25	21	36	56	109	42
AH64	0	0	0	0	0	18
CHAPARRAL	0	12	24	12	24	30
HMMWV	0	0	0	2895	3960	5208
HEMTT	0	0	0	302	1070	TBD
TRUCK 5T	130	198	883	589	416	312
UH60	6	2	7	18	36	19

Figure 2.8

Modernization also encompasses the product improvement of current equipment. For example the M60A3 tank, the Tube launched, Optically tracked, Wire command-link guided (TOW) 2 missile, CH47D, Advanced Helicopter Improvement Program (AHIP), Chaparral, and Hawk are partners on today's battlefield because of product improvements. We are incorporating this strategy through pre-planned block improvements for programs such as the Abrams tank and BFV. This will allow us to maintain technological currency as the threat changes. The use of off-the-shelf, non-developmental items (NDI), compatible with military requirements, is another economical approach we are using to field rapidly needed quality systems.

To assist this rapid fielding of quality systems, the Army Development and Employment Agency (ADEA) received a new mission in 1985. The new mission is to expedite development of materiel systems, related operational concepts, organizational and operational plans, and training developments using emerging technologies in support of motorized, light, heavy, and special operations forces. ADEA will also support Army test bed missions and low intensity conflict requirements. ADEA will focus on short term evaluations and demonstrations of non-developmental items, contractor proposals, and Army laboratory submissions which can offer the potential for cost effective and practical solutions to Army requirements.

From the start of the present modernization program, the conviction that a small, high-quality Army with modern, lethal equipment can defeat an adversary with superior numbers has governed our modernization and equipping strategy. The urgency of completing our modernization program cannot be over emphasized. We cannot lapse again into a period of stagnation while Soviet trends in amassing quantitative numbers of equipment and qualitative upgrades continue unabated. With strong support from the American people, as reflected by their representatives in Congress, we have made great progress in beginning to modernize our combat forces. Continued congressional support is needed to complete this modernization of close-in forces and begin procuring deep operations systems. The opportunity to gain a qualitative edge on the battlefield must be seized.

CLOSE COMBAT

The close combat mission relates to the application of direct combat power with line-of-sight weapons and short range mortars used by infantrymen. The Army is in mid stream of an intensive close combat modernization effort. Both the Abrams tank and BFV have been fielded in substantial numbers. With the fielding of the Apache Attack Helicopter in FY 86, the Army's ability to execute AirLand Battle doctrine is markedly improved.

M1 Series-Abrams Tank. The outstanding performance of the M1 in field exercises has been conclusively demonstrated on four Return of Forces to Germany (REFORGER) exercises in Europe and in the Canadian Army Trophy competition. In all exercises the Abrams achieved a mission capable rate of over 90 percent, while giving extraordinary displays of high speed tactical maneuverability and accurate firepower.

As of 1 January 1986, 32 Abrams battalion equivalents have been fielded. One ARNG battalion has completed fielding and two more will complete fielding in FY 86. A fourth ARNG battalion will complete fielding in FY 87.

The first production delivery of the M1A1 tank in August 1985 began another important phase of the M1 program. Improvements in the current M1A1 version include a 120mm smoothbore gun (German designed, U.S. manufactured), an armor modification and a hybrid Nuclear, Biological, Chemical (NBC) system (both overpressure and ventilated face mask). The M1A1 tank system will give our tank fleet greater lethality and growth potential to meet an advanced threat.

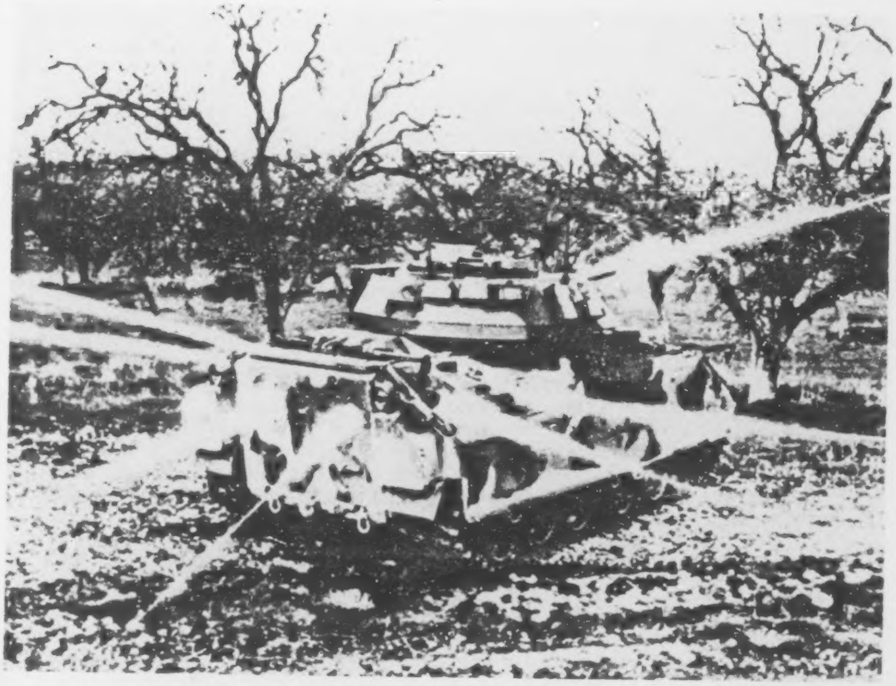
120mm Tank (M1A1) Main Gun Ammunition. Deliveries of the 120mm tank ammunition were scheduled to coincide with the first production roll off of the M1A1 tank equipped with the 120mm main gun. The 120mm munitions are: The M-829, a Kinetic Energy (KE) round, the M-830, a Chemical Energy (CE) round with a shaped charge warhead, and training counterparts for each (the M865 KE trainer and M831 CE trainer).

Bradley Fighting Vehicle. The BFV is an indispensable member of the combined arms team. The fire power from its TOW antitank guided missiles, 25mm stabilized cannon, 7.62mm coaxial machinegun and firing port weapons allows the infantry to implement AirLand Battle doctrine. The BFV's mobility and speed complement the Abrams tank, and when doctrinally employed, the BFV is a critical member in the projection of the close battle forces.

Fielding is proceeding smoothly. As of 1 January 1986, 17 battalion size units have received and fielded the BFV. Two ARNG battalions have been equipped with the BFV.

Over the fielding life cycle of a major weapon system, technology continues to develop cost effective improvements. The first modification increment for the BFV, scheduled for implementation in May 1986, will include the new TOW 2 missile and several interior design modifications.

The BFV has undergone extensive survivability testing. In the initial phase of testing, now completed, a production vehicle was tested against weapons which exceed the vehicle design protection parameters. Results



of this testing showed the BFV to be a sound, survivable vehicle. Technology has developed to the point where a significant improvement in soldier and vehicle survivability may be possible. During 1986, vehicles incorporating these improvements will be tested. If the improvements are cost effective, they will be phased into production expeditiously.

AH-64 Apache. The first Apache battalion is scheduled to be fielded in April 1986. Apache will serve as the Army's primary attack helicopter. Its armament includes the laser-guided Hellfire Missile System for defeating enemy armor and a 30mm Chain Gun and Hydra 70 Rockets which can destroy a wide variety of other targets. A Target Acquisition Designation Sight and Pilot Night Vision Sensor permits the Apache's two-man crew to navigate and attack in darkness and in adverse weather conditions.

AH-1S Cobra. The AH-1S Cobra was developed as a day anti-armor attack helicopter beginning in 1974 when the TOW missile system was mated with the AH1G to produce the Cobra/TOW. During periods of reduced visibility the AH-1S has a limited operational capability, and the TOW missile cannot be employed at night without the use of artificial illumination. To address these shortcomings the C-NITE program will equip 500 AH-1S with a forward looking infrared radar (FLIR) sensor and TOW II guidance electronics. The C-NITE development effort produced and delivered the first prototype modification kit in November 1985. Testing is ongoing with a production decision milestone scheduled for June 1986.

Army Helicopter Improvement Program. The Army Helicopter Improvement Program (AHIP) fields an artillery aerial observer helicopter that incorporates day and night target acquisition and designation capability along with improved communications, navigation, and flight capability. AHIP is able to locate, acquire and designate targets at substantial stand-off ranges for laser guided missiles such as Hellfire, Copperhead and conventional artillery.

Initial operational testing was completed last year and AHIP met or exceeded all technical requirements. Future operational testing will be conducted to verify performance improvements in support of attack helicopter and air cavalry missions. Production Verification Testing began in January 1986 and will continue through June 1986.

Light Helicopter Family. The Army's Light Helicopter Fleet (OH-58, AH-1, and UH-1) is approaching obsolescence and will be unable to meet the Soviet threat of the 1990s. The Army's answer to this situation is a lightweight, highly reliable and easily maintained Light Helicopter Family (LHX). The Army's goal is to achieve a 40 percent operations and support cost reduction over the old light fleet.

There will be two basic LHX configurations: a scout/attack version (SCAT) and a Utility design. The SCAT and Utility versions will have a high degree of standardization, using common dynamic components. The present acquisition strategy is for a competitive development through critical design review. One competitor will be selected to complete LHX development, leading to a competition for production between two or more firms.

Hellfire. Hellfire, the main anti-armor armament of the Apache helicopter, has been adapted for use on the Marine Corps' AH-1T. Hellfire is under consideration as a ground launched weapon. Hellfire has greater lethality, longer standoff range, and shorter time of flight than the TOW missile system.

TOW-2. The TOW missile has been steadily improved to keep pace with the evolving Soviet tank threat. Ongoing product improvements are designed to maintain TOW effectiveness into the 1990s. TOW-2, the latest version, gives the weapon a more lethal 6-inch warhead, greater speed and improved guidance. Since reopening the plant following quality control problems, in January 1985, TOW 2 production has gone smoothly and reliability of missiles has increased.

Advanced Anti-tank Weapon System-Medium. The Advanced Anti-tank Weapon System-Medium (AAWS-M) will replace the Dragon as the Army's medium manportable anti-armor weapons system. It will give the dismounted infantryman a weapon capable of defeating the Soviet advanced armor threat. It is the highest priority development program for our light infantry forces.

The Army approved the entry of AAWS-M into the Demonstration Validation Phase in October 1985. In FY 86 up to four competing "technology-demonstrations" will be conducted. If testing dictates feasibility, a technological approach will be chosen. Through competition, a full scale development contract will be awarded in FY 88.

Light Multi-purpose Weapon System. In September 1985 the Swedish AT4 was selected as a replacement for the 1958 vintage M72 Light Anti-tank Weapon (LAW). Testing, completed in 1985, demonstrated that the AT4 is the best possible short-range, manportable, lightweight anti-armor weapon. A 5-year procurement plan has been approved and is complemented by other service purchases. Initial procurement (3 years) is planned from foreign sources. The feasibility of producing the weapon domestically, probably starting in 1988, will be determined.

Small Arms. Initial issue of the M16A2 rifle to frontline combat troops is expected to be made in the 4th quarter of FY 86. The M16A2 incorporates improvements in sights, barrel, pistol grip, stock and overall combat effectiveness. Its accuracy has been improved and its maximum effective range increased from 460 to 550 meters.

The 9mm Personal Defense Weapon will begin replacing the .45 caliber pistol in March 1987. The Army, as executive agent for the

Armed Services, awarded a 5-year multiyear contract in April 1985 to procure 315,930 handguns. Complying with congressional direction, the Army is studying the feasibility of accelerating the purchase of all service requirements through award of a second multiyear contract or through the execution of options contained in the current contract. The overall goal of the 9mm program is to eliminate proliferation of different handguns and to standardize ammunition with our NATO allies.

Mortars. The Army submitted its Mortar Master Plan to the Congress in July 1985. The plan contains the requirements for the three mortar family, and the acquisition strategy for the 81mm and 120mm mortars and their munitions.

The 120mm mortar will be the battalion mortar for heavy forces. The mortar will be acquired through an NDI acquisition strategy. A competition among foreign competitors will occur in the latter half of FY 86 that should result in a contract to begin fielding in FY 87. There will also be an ammunition development program for the 120mm mortar which will include a full family of ammunition (High Explosive, Smoke, Illuminating, and Training) with production to start in FY 87.

The British manufactured Improved-81mm mortar will be the Army's new medium mortar. This mortar, which consists of American and British components, has improved range, stability, fire control and lethality compared to the present 81mm mortar. The first year of the contract for procurement was signed in May 1985. Fielding will begin in early FY 87. Enhanced capability ammunition for the I-81 mortar system will eventually be produced in the United States.

The 60mm mortar will be retained as the company light mortar. Improved, longer-range ammunition is being developed. As of 1 January 1986, 1,576 60mm, M224 Lightweight Company Mortars have been procured.

CLOSE COMBAT

(NUMBER OF SYSTEMS)

SYSTEM	PROCURED THROUGH FY 85	FY 86 PROC	FY 87 PROC REQUEST	TOT PROC OBJECTIVE
M1 SERIES	4,166	840	840	7,467
BFV	2,955	716	870	6,882
AH-1S COBRA/TOW	1058	0*	0	1087*
AH-64 (APACHE)	309	144	144	675
AHIP	60	39	48	578
HELLFIRE	15,082	6,576	0	40,676
TOW	55,883	12,700	12,000	139,886
AT4	60,000	81,000	136,000	403,000
120MM MORTAR	0	0	138	2,606
81MM MORTAR	441	187	450	1,449
M16A2	93,872	71,990	84,326	530,000
9MM PDW	30,000	25,400	21,219	138,052

*WILL CONVERT 29 AH-1G TO AH-1S CONFIGURATION.

Figure 2.9

FIRE SUPPORT

Fire support covers systems integral to Field Artillery operations. It includes conventional, nuclear, and chemical fire support provided by cannon, rockets and missile systems, as well as supporting target acquisition and communication systems.

Multiple Launch Rocket System. As of 1 January 1986, 15 of 41 MLRS batteries have been fielded. All are on schedule and within costs. MLRS is an all-weather, indirect fire system that can deliver overwhelming firepower against enemy artillery, air defense, and other light materiel and personnel targets, such as assembly areas and command posts. It can fire up to 12 rockets to ranges over 30 kilometers in less than one minute. Growth potential for MLRS exists for a scatterable anti-tank mine warhead, terminal guidance warhead, sense and destroy armor (SADARM) warhead, and binary chemical warhead.

The FY 87 budget will be used to continue to procure rockets. It will also support fielding of four additional MLRS batteries.

MLRS was developed by the United States and will be co-produced by the United States, United Kingdom, Federal Republic of Germany (FRG), France and Italy. The U.S. Navy is also investigating it as a weapon aboard ships.

MLRS Terminal Guidance Warhead. AirLand Battle doctrine dictates a need for an autonomous, terminal homing indirect fire and forget capability to defeat hard, point targets such as armored vehicles before they are committed into the central battle. The concept of a Terminal Guidance Warhead (TGW) for the MLRS envisions the attack of armored targets from above using highly accurate and lethal submunitions dispensed from a MLRS rocket. The TGW for the MLRS will contain six submunitions packaged within the rocket warhead section.

This is the first co-developed weapons system for the Army. Each partner has responsibility to develop and test a portion of the submunition and to ensure system interface. The United States pays 40 percent of the costs while each European partner pays 20 percent.

Army Tactical Missile System and Joint Tactical Missile System. AirLand Battle doctrine dictates a need for an effective deep attack capability to isolate the close battle and disrupt the enemy's ability to deploy follow-on forces. The Army Tactical Missile System (Army TACMS) is a MLRS-launched, deep strike, conventional, semiballistic missile. Joint Tactical Missile System (JTACMS), also MLRS-launched, is a deep strike cruise missile being developed jointly with the Air Force.

Army TACMS and JTACMS capability will be superimposed on the existing MLRS force structure. All MLRS launchers will be capable of firing Army TACMS and JTACMS as well as all MLRS munitions.

Pershing II. Since the initial operational capability for Pershing II (PII) was achieved in the FRG in December 1983, we have continued to field PII systems on schedule. Although some modifications have been made to the system as a result of an accident in January 1985, these modifications have not affected the deployment schedule.

PII is a significantly more accurate missile than its predecessor, Pershing IA and has shown a higher rate of mission readiness.

The FY 86 funding request would have completed procurement of missiles required to support fielding and the planned missile flight test program. However, the FY 86 appropriation results in a decrement of 33 missiles. This precludes the planned assignment of contingency missions to the Pershing II battalion at Fort Sill, Oklahoma. FY 87 funding will provide for procurement of missile flight instrumentation kits.

M109A2/A3 155mm Howitzer. For a portion of the M109A2/3 fleet, the Army approved a product improvement program to extend its useful life to the 21st century. Modifications will provide improved system reliability, availability, and maintainability (RAM) and survivability. It includes an improved recoil and cannon which provides the capability to fire to a maximum range of 30 kilometers, an on-board ballistic computer and gun positioning system, micro-cooling for increased capability of operation in a nuclear, biological and chemical (NBC) environment and improved ballistic protection.

M119 105mm Howitzer. The 105mm M119 Howitzer (L119 British Light Gun) has completed a highly successful evaluation program. The mean time between operational failure is five times that of the M102 Howitzer. The M119 will provide indirect fire support for the five light infantry divisions and other Rapid Deployment Forces. This weapon affords the commander the improved range and performance needed to maintain his maneuverability and quick strike

capability. The program is constructed within a highly innovative and progressive acquisition strategy leading to domestic production. The first year of procurement is scheduled for FY 87.

Advanced Field Artillery Tactical Data System. Advanced Field Artillery Tactical Data System (AFATDS) is the fire support control segment of the Army Command and Control System (ACCS). AFATDS is specifically designed to provide fire support decision information to the force commander, exchange staff information with other command and control systems and provide automated assistance to the functions of fire support planning, command, control, and coordination.

AFATDS will also correct the fire control and distribution deficiencies of the current TACFIRE system with no increase in personnel requirements, and with greatly reduced size, and minimized training burden. The acquisition strategy for AFATDS is first to design, develop and prove the software, then select the hardware to meet system performance and man-machine interface requirements. Fiscal Year 87 funds are required to complete software tests and enter full scale development.

Field Artillery Ammunition Support Vehicle. The Field Artillery Ammunition Support Vehicle (FAASV), a tracked, self-propelled armored ammunition carrier, will begin fielding in Europe in FY 86. This will fill a critical modernization requirement because currently fielded M548 ammo resupply vehicles are unarmored, vulnerable and lacking in survivability.

Fiscal Year 87 procurement supports fielding to forward deployed 155mm artillery units and partial POMCUS fill.

Fire Support Team Vehicle. The Fire Support Team Vehicle (FISTV) provides increased capability to the Fire Support Team in target location accuracy, survivability, mobility, integration of fires and responsiveness. It combines new laser improved artillery observer equipment within the M113 personnel carrier. Because of budget constraints, procurement of the FISTV ends in FY 87.

Copperhead. Copperhead is presently the Army's only artillery delivered indirect fire precision guided projectile capable of destroying specific hard-point, high-value targets such as tanks and command posts. It can be cannon-launched from any 155mm cannon in the inventory out to a range of 16 kilometers. The demonstrated reliability of Copperhead has steadily risen to approximately 92 percent. Copperhead achieved its Initial Operational Capability date in Europe in FY 85 and achieved 10 hits of 12 shots in a recent joint exercise against stationary, moving, and multiple targets. The FY 87 budget request will bring the program to an economic production rate.

Artillery Fired Atomic Projectiles. Artillery Fired Atomic Projectiles (AFAP) have provided a vital part of deterrent and warfighting capability for over 30 years. Modern AFAPs are essential to provide a credible battlefield nuclear capability. A credible AFAP capability forces threat maneuver units to disperse, thereby enhancing the overall effectiveness of conventional defenses.

In FY 87 we will continue plans for producing the W82 155mm AFAP. The Army continues to execute the plan reported to the Congress in accordance with the DOD Authorization Act of 1985. However, the ceiling imposed on the total number of modern nuclear projectiles produced results in fewer modern AFAPs than the Army requirement. This will result in prolonging the retirement of some aging W33 8-inch and W48 155mm AFAPs.

Safety, Security, and Survivability of the U.S. Nonstrategic Nuclear Force. Although serious upgrading of security for U.S. Army nuclear facilities began in 1976, significant improvements have recently been made. The threat by small, manportable weapons has been countered using the Weapons Access Delay System, which places a series of obstacles and delays between the weapons and any threat, and intrusion detection alarm systems, designed to detect attempted penetrations of storage sites and facilities world-wide. Other developments include the use of robotics and artificial intelligence to detect, assess, and respond to attempted penetrations or threats to nuclear weapons; improved security force equipment; and more sophisticated use of control and denial features. Installation of obscuration devices, closed circuit television, detection alarm systems, and improved facilities will strengthen Pershing II security.

For safety, obsolete weapons are being retired, and modern warheads are being fielded with less sensitive high explosives and sophisticated use, control, and denial features.

FIRE SUPPORT

(NUMBER OF SYSTEMS)

SYSTEM	PROCURED THROUGH FY 85	FY 86 PROC	FY 87 PROC REQUEST	TOT PROC OBJECTIVE
M119 (105MM HOW)	0	0	88	542
M109A2/A3 (155MM HOW)	0	0	0	1700
FAASV	344	134	129	973
FISTV	529	200	126	856
MLRS LAUNCHERS	304	44	44	491
COPPERHEAD	16,187	6900	248	31,806

Figure 2.10

For survivability, more needs to be done to protect the capability to employ our nuclear assets no matter what the threat environment. Programs in development include ballistic launcher protection for Pershing II; a secure weapons transport system to store and transport nuclear weapons with minimal exposure; hardening of equipment against electromagnetic pulse (EMP), a secure storage concept of in-ground storage vaults and facilities to prevent or delay access, and improved upload systems for more rapid dispersal.

AIR DEFENSE

Our air defense artillery systems must protect all ground force elements including troop formations, depots, lines of communication, air bases, key command and control facilities, and other vital assets. Comprehensive air defense production for these assets is needed at all ranges and altitudes. Our major shortcoming is the lack of adequate air defense coverage for the Army forward maneuver units.

Forward Area Air Defense. With the decision in August 1985 to terminate the Sgt. York Division Air Defense (DIVAD) program, the Secretary of Defense directed the Army to provide effective solutions to the urgent requirement for air defense of Army divisions. A concept has been developed by the Army as the framework to provide near and long term solutions to counter the growing air threat from both the broad AirLand Battle and the more specific close combat perspective. Based on this concept the Army has assessed current air defense artillery systems and combined arms and U.S. Air Force capabilities to determine deficiencies. Upgrades to current systems, U.S. and foreign alternative systems, and new technologies were examined to determine which system or combination of systems could best solve the deficiencies. Developments in these areas will drive acquisition programs to meet the needs for the joint and combined arms counter air strategy.

The emerging counter air concept has led to the conclusion that the rapidly expanding air threat will require an integrated systems approach with multi-service contribution in a coordinated combined arms effort. The close combat solution will require a combination of weapons and sensors that adequately defeat the array of standoff attack helicopters, fixed wing aircraft, drones, and tactical missiles which can attack the committed combat units of the division. In January 1986 the Army leadership approved a candidate list of four missile systems with the potential to add a gun hybrid for final evaluation and selection in FY 87. They also approved development of a new non-line-of-sight system to meet the standoff helicopter threat and a fully integrated command, control, and intelligence system to support the weapons.

Funding this program in FY 87 is essential to the rapid fielding of an integrated counter air program to solve the critical air defense deficiencies in Army divisions world-wide.

Patriot. Patriot is an advanced surface-to-air guided missile system capable of operating in an electronic countermeasures environment against high speed aircraft at all altitudes.

Successful completion of the Follow On Evaluation (FOE) III led to deployment of the first European Patriot battalion in January 1985. Two U.S. battalions have now deployed to Europe and a third battalion is undergoing training at Fort Bliss, Texas.

A total of 103 Patriot systems will be procured for the United States, 14 of which will be provided to German forces under the terms of the U.S./FRG Air Defense Agreement. The FRG will also purchase an additional 14 Patriot systems, while the Netherlands will purchase 4 systems. Japan has also selected Patriot to modernize its air defense.

Product Improved Vulcan Air Defense. The VULCAN air defense gun is now undergoing major product improvements in its fire control subsystems. The analog ballistic computer will be replaced by a digital microprocessor, a stabilized director-type sight will replace the existing sight, the azimuth and elevation systems will be modified to reduce backlash and built in test equipment will be incorporated.

Because of the termination of the DIVAD Gun program, the Army is reviewing the forward area air defense requirements and will reassess the planned use of the product improved Vulcan.

Stinger. Stinger is the Army's shoulder fired, manportable air defense system. Stinger uses a passive infrared homing seeker to engage targets from all angles, and an electronic means of identification. A follow-on seeker, Stinger-Passive Optical Seeker Technique (POST), improves the capability of the system in certain infrared countermeasures environments. Stinger-POST will initially be fielded in FY 87.

Stinger-Reprogrammable Microprocessor (RMP) further enhances the performance of Stinger in certain infrared countermeasures environments and provides the capability through a replaceable software module to make future changes as the threat evolves. RMP development is being conducted concurrently with POST modifications.

A production contract for 3,216 Stinger-POST missiles was awarded in August 1985, and modified to RMP in October 1985. Missiles delivered in late FY 87 and FY 88 will be RMP configured.

Pedestal Mounted Stinger is a NDI initiative to improve the Stinger capability. Initial production will start in 1987 with deliveries of the first system in FY 88.

Hawk. Hawk is a medium-range air defense guided missile system designed to provide air defense coverage against low to medium altitude air attack. It provides vital asset coverage for air bases, and critical logistics and corps air defense priorities. The thrust of the FY 87 effort is to continue production of product improvement kits which will increase firepower and mobility, while greatly reducing manpower requirements. The ARNG is scheduled to accept at least three Hawk battalions as part of ongoing modernization initiatives.

Chaparral. Chaparral, the Army's short range air defense missile system, can engage all types of aircraft at low altitudes and provides protection for forward deployed divisions and corps and theater rear areas. Chaparral was first fielded in 1969 and will remain in the inventory through the 1990s.

Fielding of the first Chaparral battalion for the ARNG at Roswell, New Mexico was completed in November 1985. The second ARNG battalion will complete fielding in the 1st quarter, FY 87.

AIR DEFENSE

(NUMBER OF SYSTEMS)

SYSTEM	PROCURED THROUGH FY 85	FY 86 PROC	FY 87 PROC REQUEST	TOT PROC OBJECTIVE
PATRIOT FIRE UNITS	58*	12	12	103
STINGER MISSILES	11,660	3,439	4,160	50,864
CHAPARRAL FIRE UNITS	544	64**	0	632

*INCLUDES 3 FIRE UNITS PROCURED WITH NATO AIR BASE AIR DEFENSE FUNDS.

**24 AUTHORIZED, NOT APPROPRIATED, 40 TO BE REPROGRAMMED FROM SGT YORK.

Figure 2.11

COMMAND, CONTROL, AND COMMUNICATIONS

In Command, Control, and Communications the Army is working toward a truly automated battlefield capability. To implement fully AirLand Battle doctrine, the synchronization of forces and their ability to move quickly, frequently, and adroitly on the battlefield is dependent on communications systems. Commanders must have modern communications equipment to determine rapidly the tactical situation and to communicate in an enemy electronic countermeasure environment. The Army continues to develop and test communications and automation systems to operate with like systems of other services and allied nations.

Single Channel Ground and Airborne Radio System. The Single Channel Ground and Airborne Radio System (SINCGARS) family of radios will be lightweight, secure, capable of providing both voice and data transmission and possess Electronic Counter-Counter Measures features. SINCGARS radios are configured in manpack, vehicular, and airborne models. The modular approach permits the replacement of 14 currently fielded radios and reduces the maintenance burden.

Fielding to the 2nd Armored Division at Fort Hood, Texas will begin in FY 88.

Mobile Subscriber Equipment. Mobile Subscriber Equipment (MSE) is a cellular area communications system that will provide military commanders with a survivable, secure, mobile capability to transmit and receive voice, data, and facsimile throughout the battlefield. MSE will provide multiple communications nodes with network features which automatically bypass and re-route communications around damaged or jammed nodes. The MSE system incorporates components of the French Army's RITA mobile communications system, but more than 70 percent of the contract value will be produced in the United States. Acquisition of MSE will complement other new systems, allowing the Army to implement fully the command, control, and communications aspects of its AirLand Battle doctrine.

The MSE program is a milestone in acquisition procedure. MSE used an innovative, competitive NDI acquisition strategy which will avoid an estimated $500 million in research, development, test and evaluation (RDTE) fundings, and a lengthy development period. The production contract, signed in December 1985, will allow the Army to begin fielding this new capability in less than three years and complete converting the Army by 1994. Compared to prior Army plans for tactical battlefield communications, MSE will avoid over $1.5 billion in acquisition costs and more than $8 billion in life cycle costs. Additionally, MSE, along with associated equipment and doctrinal changes, will free over 5,000 soldiers for use elsewhere on the battlefield.

Joint Tactical Communications. Joint Tactical Communications (TRI-TAC) is a joint communications modernization program to provide command and control through the development of high speed digital transmission, switching, terminal and system control equipment. TRI-TAC is targeted for employment at Echelons Above Corps and will provide interface with MSE, other services, defense systems, and allies. In early 1987 the TRI-TAC program will deploy transmission equipment to complement the large capacity circuit and message switches previously fielded.

Military Strategic and Tactical Relay/Single Channel Objective Tactical Terminal. The Military Strategic and Tactical Relay (MILSTAR) is an advanced satellite system which will provide DOD with an extremely survivable and anti-jam strategic and tactical communications capability. The Single Channel Objective Tactical Terminal (SCOTT) is an Army satellite terminal. While all services will use the SCOTT, the Army intends to use it to support command and control requirements from selected brigade elements at division through theater levels.

The SCOTT will be housed in a shelter with a set up time not to exceed 30 minutes. It will provide four voice equivalent channels of secure communications. The SCOTT was approved for engineering development and a contract was awarded in December 1985. Full scale production will begin in FY 89.

The Army Data Distribution System. The Army Data Distribution System (ADDS) is an automatic tactical data distribution system capable of meeting near real-time data communications and position-location reporting requirements, regardless of terrain or weather. The ADDS represents a merging of the Position Location Reporting System (PLRS), a joint Army/Marine program, and the Army/Air Force/Navy Joint Tactical Information Distribution System (JTIDS) program. The ADDS is also known as the PLRS/JTIDS Hybrid.

The Army will equip 18 divisions and 5 corps with the ADDS, starting in late 1986. PLRS equipment, being procured under a 4-year multiyear production contract, will be modified to the ADDS configuration to field the first two Army Divisions. JTIDS is presently in joint development and operational testing at Eglin Air Force Base. A production decision on JTIDS is planned for early 1987.

Maneuver Control System. Maneuver Control System (MCS) provides the maneuver control segment of the Army command and control system. MCS is designed to provide the maneuver commander automated assistance in the collection, storage, review and display of battlefield information. It provides the ability for processing and distributing battle plans, orders, estimates and reports.

MCS is an integrated system of military specification and NDI items. Prototype hardware has been in the field since 1981 and software evolution continues. Production of the military specification MCS hardware is in its third year with fielding scheduled for 4th quarter, FY 86. The NDI contract award will be made in 2nd quarter, FY 86.

Defense Satellite Communications System. The Defense Satellite Communications System (DSCS) is a world-wide long haul satellite communications system designed to meet unique and vital military needs. The Army's responsibilities in this joint program are the development, procurement, maintenance, and training for ground satellite communications terminals, control systems and related communication subsystems for deployment at over 100 DSCS facilities throughout the world.

The FY 87 budget will support key survivability improvements in the DSCS. Procurements will complete the Jam Resistant Secure Communications System, support modernization, automation and increased system survivability. Work will be completed on eight DSCS control facilities to satisfy DSCS operations control requirements.

Joint Surveillance and Target Attack Radar System. The Joint Surveillance Target Attack Radar System (Joint STARS) is a battle management and target attack control system which detects, tracks, classifies and assists in attacking both moving and stationary targets beyond the Forward Line of Own Troops (FLOT). It allows the commander to see and strike deep into the enemy's rear, a critical need to execute successfully AirLand Battle doctrine. The Air Force is responsible for the Prime Mission Equipment (platform, radar and data link) and the Army is responsible for the Ground Station Modules (GSM).

The Joint STARS aircraft will orbit behind the FLOT, while the radar performs multimode functions to acquire targets. Target radar data will be transmitted to Air Force command, control, communications and intelligence (C3I) nodes and to Army GSMs located in the divisions and corps. The Army will process data at the GSM and disseminate the battlefield intelligence and targeting information to its users over the All Source Analysis System (ASAS) and TACFIRE/AFATDS nets, respectively.

Joint Tactical Fusion. The Joint Tactical Fusion program is developing the ASAS for the Army and Enemy Situation Correlation Element (ENSCE) for the Air Force. ASAS/ENSCE is an automated system which will analyze, fuze, and report intelligence information from tactical and strategic sensor and other intelligence sources. The view of the battlefield it provides commanders will guide the prosecution of the AirLand Battle and the deep attack. Hardware and software contracts were let and system design reviews were conducted during FY 85. Development testing and operational testing will begin for two of the four system modules in FY 86, and for the remaining system modules in FY 87. Procurement of modules tested in FY 86 will begin in FY 87, providing a limited fusion capability to the field.

Unmanned Aerial Vehicle. The Army is developing a low intensity/high intensity mix of systems as a part of a family of Unmanned Aerial Vehicles (UAV). The Army intends to execute an NDI procurement program in FY 86 in response to its need for a mix of systems.

Aquila, one member of the family, is a small (13-foot wingspan) propeller-driven, pilotless aircraft designed to fly in hostile territory to locate targets, allow adjustments of artillery fire from remote distances, and laser designate targets for destruction by laser-seeking artillery or missiles. It can also perform reconnaissance, damage assessment and other functions. Development of a FLIR device began in FY 84 to provide a night/adverse weather capability.

Production of the Aquila is expected to begin in FY 87. The FY 87 budget continues Aquila related RDTE, begins procurement of the Aquila system, and allows evaluation of other off-the-shelf systems to meet near term intelligence, and electronic warfare requirements.

COMMAND, CONTROL, AND COMMUNICATIONS

(NUMBER OF SYSTEMS)

SYSTEM	PROCURED THROUGH FY 85	FY 86 PROC	FY 87 PROC REQUEST	TOT PROC OBJECTIVE
SINCGARS	12,100	400	16,000	277,703
ADDS (SETS)	0	3	8	120
MSE				
(DIV BN SETS)	0	1	5	26
(CORPS BN SETS)	0	0	5	20
JSTARS (GROUND STATIONS)	0	0	6	72
UAV	0	0	8	376

Figure 2.12

COMBAT SUPPORT AND COMBAT SERVICE SUPPORT

Modern support equipment provides operational assistance to the combat arms in the execution of AirLand Battle doctrine. Tactical transportation needs have undergone dynamic changes. Both in the air and on the ground, our mobility has greatly improved.

Tactical Wheeled Vehicles. The High Mobility Multipurpose Wheeled Vehicle (HMMWV) and Commerical Utility Cargo Vehicle are complementary light payload vehicles which are replacing the current fleet of M880s, Gama Goats, Mules and jeeps. The FY 87 budget supports the fifth multiyear production of over 12,800 HMMWV.

10-Ton Truck Fleet. The Heavy Expanded Mobility Tactical Truck (HEMTT) will continue to be procured from the current producer. The heavy-load fleet follow-on program, based on a palletized loading system concept, will begin testing of competitive prototypes in FY 87.

UH-60 Black Hawk. Black Hawk is a twin-engine, single-rotor utility helicopter that can carry up to 14 combat-equipped troops or an equal cargo load into all intensities of conflict and in all expected geographical environments.

Black Hawk has been successfully employed in a variety of missions under demanding tactical conditions, including the Team Spirit exercise in Korea and the REFORGER exercise in Germany. Black Hawk was also used extensively in Grenada.

As of 1 January 1986, 701 UH-60 Black Hawk aircraft have been delivered to the Army. The Black Hawk airframe is being procured under a second multiyear contract (FY 85), which has significantly stabilized the production base and avoided substantial potential costs.

A FY 86-88 T-700 series engine multiyear contract will be awarded in early 1986. The T-700 FY 86-88 multiyear contract will provide T-700 series engines for Army, Navy, and Air Force aircraft.

CH-47D. The CH-47 medium lift helicopter is being modernized to the D model configuration to extend the service life beyond the year 2000, to improve safety and RAM, and to improve capability to meet a new requirement—the aerial movement of newer tactical equipment within the battle area.

The CH-47D configuration is fixed; the program is not test dependent and there are no technical problems. All contracts have been executed within cost and on schedule.

M9 Armored Combat Earthmover. The M9 Armored Combat Earthmover (ACE) is a highly mobile, armored, earthmoving vehicle. It meets the combined arms requirement for an engineer vehicle that can dig, doze, haul and scrape and offers the operator protection from small arms fire, artillery fragmentation, and NBC effects. The ACE is amphibious and possesses a communications capability. Its responsiveness and survivability enable the ACE to prepare fighting positions, create obstacles, and enhance friendly force maneuver on the forward battlefield.

The ACE will be fielded to the heavy and light forces. In March 1986 the 7th Infantry Division (Light) will be the first unit equipped.

Other Support Equipment. The procurement of combat support equipment to cover new requirements and replace obsolete equipment must keep pace with the needs of the modern battlefield. With emphasis on water purification units, mobile electric power, bridging, mine and countermine items, and chemical and maintenance equipment continuing efforts to modernize all aspects of combat service support equipment are being made.

Tactical Army Combat Service Support Computer System. Tactical Army Combat Service Support Computer System (TACCS) is a transportable microcomputer system using rugged off-the-shelf components. The FY 87 request continues production and supports the fielding of TACCS to seven divisions and numerous nondivisional units.

Improved Clothing and Individual Equipment. Research and development projects to upgrade and improve soldiers' clothing and individual equipment continue. These projects are directed at development of significant improvements in NBC, laser/ballistic, and climatic extreme clothing and equipment to protect, sustain and increase the survivability of the soldier on the modern battlefield.

Organizational clothing and individual equipment (OCIE) has been inadequately funded for a number of years while requirements have continued to grow. Critical items include personnel armor system ground troop (PASGT) helmet and vest, combat vehicle crewman (CVC) uniform system, extended cold weather clothing system and the desert uniform. The OCIE modernization program 's fully integrated with the projected activation of the new light divisions. To enhance safety, the Army is funding the fighting force clothing needs; issuing PASGT helmets to high priority units and taking action to make the CVC uniform system mandatory for training. The new systems will greatly improve our support for the individual soldier by lightening the load and providing state-of-the-art, weather resistant, camouflage and ballistic protection.

COMBAT SUPPORT AND COMBAT SERVICE SUPPORT

(NUMBER OF SYSTEMS)

SYSTEM	PROCURED THROUGH FY 85	FY 86 PROC	FY 87 PROC REQUEST	TOT PROC OBJECTIVE
HMMWV	18,464	12,132	12,842	101,633
10 TON	8,202	661	1,823	18,013
UH-60	899	78	78	1107
CH-47	136	48	48	436
M9 (ACE)	15	22	21	580

Figure 2.13

NUCLEAR, BIOLOGICAL, AND CHEMICAL

Chemical Warfare Deterrence and Binary Munitions. As the threat of chemical warfare increases around the world, we have provided more protection, decontamination, and monitoring equipment. In FY 86 the Army initiated procurement of the United Kingdom Chemical Agent Monitor. In FY 86 we are procuring a simplified collective protection shelter, an improved protective mask, an individual equipment decontamination kit, and a mobile smoke generator system. In FY 87 we will begin procurement of a new automatic detector with greater capability. Major payoffs from the RDTE program are just beginning and more will be realized over the next few years. However, serious shortages remain. Moreover, defense alone is not enough. The Army's

chemical defense readiness has improved, but our ability to deter chemical warfare is still weak. Even improved chemical defense does not compensate for the 30 to 50 percent loss of operating capability caused by use of protective equipment. Our deterrent capability is not adequate and will remain inadequate until we field a modern chemical retaliatory capability.

The present stockpile has become obsolete for use on the modern battlefield and does not meet the requirements of our field commanders. It is potentially dangerous to maintain and use because of its deadly chemicals. We have made the difficult but responsible commitment to rid ourselves of this old stockpile and, with the help of Congress, replace it with a safer, more effective, and smaller binary munition stockpile. Such a commitment to modernization is key to restoring a meaningful chemical warfare deterrent and progress in efforts to ban chemical weapons altogether. Toward this end, the Army has requested FY 87 funds to continue to build binary production base facilities and produce binary munitions.

Modernization of Dugway Proving Ground. The Army is the lead service for chemical warfare and chemical-biological defense (CW/CBD) development and testing for all DOD components. Dugway Proving Ground, Utah, a major range and test facility, has the mission to test CW/CBD, and smoke and obscurant items to ensure they perform adequately. For many years Dugway was maintained at only a minimum operational capability and did not keep up with the rapid technological changes of the past decade. Without modern and expanded capabilities Dugway cannot meet the projected workload from the increased CW/CBD research and development programs.

Fiscal Year 87 will be the second year of full modernization to restore a test capability to meet the increased test workload. A new materiel test facility and continuation of family housing improvements are included in FY 87. The modernization of facilities is paced with the projected test workload. The modernization will upgrade the technological characteristics and capability of the instrumentation base for measurement of smoke and obscurants and for use in defense test chambers. Laboratory test facilities will be modernized and communications will continue to be upgraded.

Medical Defense Against Agents of Biological Origin. The Army has tri-service responsibility for research on medical defense against biological warfare. A vigorous research program is necessary because of indications that the Soviets maintain an active research and development effort in this area. The anthrax accident in Sverdlovsk, the use of yellow rain by Soviet surrogates in Southeast and Southwest Asia, and recent reports that the Soviets have greatly expanded their Agents of Biological Origin (ABO) program are evidence of their capability. Added to this threat is the long lead time required to develop prophylactic and therapeutic measures against ABOs even on a generic basis.

The FY 86 budget includes an expanded effort to develop generic protection against ABOs. Work continues toward development of several vaccines, antidotes, and a rapid identification diagnostic system against potential ABOs. The FY 87 request provides funds to consider the feasibility for expanding the industrial base of the production of potential vaccines. Vaccines for Tularemia, Rift Valley Fever, and Venezuelan Equine Encephalitis will be available in FY 86.

STRATEGIC SYSTEMS

Strategic Defense Command. The U.S. Army Strategic Defense Command, the Army component of the President's Strategic Defense Initiative (SDI), has successfully managed a research program in excess of $800 million in the five functional areas of ballistic missile defense: surveillance, acquisition, tracking and kill assessment; kinetic energy weapons; directed energy weapons; systems analysis battle management; and survivability, lethality, and key technologies. This research is necessary to demonstrate technologies leading to a multi-tiered strategic defense system. DOD manages the President's program through the SDI Organization which, in turn, coordinates the research efforts of the services and other government agencies, and the national laboratories.

The FY 87 program will continue to research technologies in the areas of surveillance and sensors, directed energy weapons, and battle management with potential application to strategic defense systems. This work offers the Army an opportunity to make major contributions to strategic defense through application of its unique knowledge in these areas. This research effort will facilitate integration of the ballistic missile defense technology programs into the Army's long range plans.

TRAINING THE ARMY

The imperative for quality training has never been more challenging. Within the framework of a revitalized combined arms concept, new tactics place higher emphasis on initiative, flexibility and synchronization. To transform textbook theory into wartime practice requires well-trained units. New weapons systems are more mobile and lethal making possible the ongoing doctrinal revolution. To transform design potential into battlefield capability requires well-trained individuals and crews. To transform these highly motivated volunteers into combat ready soldiers, crews and units require well-trained leaders.

Army training focuses on the attainment, enhancement and sustainment of individual and collective skills contributing to the application of raw combat power and its lethal multipliers on the battlefield. Even though today's training is better than ever, the challenge for the future, given the reality of a constrained budgetary environment, is to maintain as high a degree of training readiness as possible, with reduced training resources. Momentum must not be lost.

Key to this effort will be the deliberate application of emerging training technology. Current programs and projected initiatives are being crafted into a series of integrated training strategies providing an optimum mix of air and ground maneuver, live fire, and surrogate training devices. A forecast measure of training readiness will link quantifiably these strategies and the resources required to support them.

The professional development of our officers and noncommissioned officers at all echelons is instrumental to training readiness. Strong leader development is an imperative. An overemphasis on the machinery and technology of war can overshadow the human factor. Quality soldiers provided quality leadership will yield quality results in training or in combat. A reemphasis on leadership is taking place in both the school and unit. It is a low cost investment with high yield benefits.

Unit training will concentrate on mission essential tasks at battalion and below, use of simulation-supported command post exercises where feasible, and employment of innovative and non-traditional means of maintaining combat proficiency within operating tempo (OPTEMPO) constraints. The flying hour program will combine pilot and crew individual training requirements with unit mission and combined arms training to the greatest extent possible. Execution will be closely managed. RC training and training support will be tailored to make the most effective and productive use of extremely limited training time, home station facilities, and maneuver areas.

Training in schools will continue to develop and produce highly qualified soldiers and leaders possessing tactical and technical proficiency in the combat, combat support and combat service support skills. Managerial emphasis will strive toward technology-based increases in training efficiency and effectiveness while providing a stable training base in support of programmed loads.

Training resources at all echelons must be stringently managed. The ultimate goal must continue to be the attainment of a higher degree of individual, crew and unit training proficiency at equal or lower cost. This must be accomplished despite substantially higher ammunition, operating and support costs associated with much of the modern equipment. The challenge is significant.

Schools. The Army is in the midst of redesigning its formal school structure to improve the progressive development of warfighting and technical skills necessary for today's environment. In general, school curriculums are structured around a common core of warfighting skills appropriate to the grade of the student. This common core is supplemented with professional study of topics such as the art of war and specialized instruction to develop tactical and technical competence for future assignments. Recent innovations include:

- Ranger 3000
- Restructure of the Noncommissioned Officer Education System
- Combined Arms Services Staff School (CAS3)

Ranger 3000. The Ranger course is a mix of dynamic instruction and challenging experience. Instruction sets the stage for experiential learning of tactics, combat techniques, night training, leadership skills, physical endurance, and geographical indoctrination.

Recent initiatives increase the required Ranger positions in the Army from less than 1,000 to a projected total of almost 7,000 by FY 87. These needs translate to an annual training requirement of over 3,000 soldiers. By FY 87, the Army will increase the available training opportunities for Rangers from 2,300 to over 3,000 slots annually.

Restructure of the Noncommissioned Officer Education System. The Noncommissioned Officer Education System (NCOES) is being restructured to provide sergeants in combat support and combat service support branches with the same type of leader development oriented professional training afforded their counterparts in combat branches.

With the realignment of NCOES, noncommissioned officer (NCO) training follows a common track. Training for NCOs focuses initially on leadership in the Primary Leadership Development Course. The next step is the Basic Noncommissioned Officer Course (BNCOC) that contains standard leader training required throughout the Army and skill training that addresses directly the requirements of soldiers serving in each branch of the Army. The principal purpose of BNCOC is to produce highly trained and motivated NCO section or squad leaders. The increased emphasis on soldier skills and common understanding of tasks taught in these NCOES courses serves to bond the NCOs of all branches. The NCO will continue professional training in the Advanced Noncommissioned Officers Course. The capstone of the NCOES is the highly selective and challenging Sergeants Major Course taught at the U.S. Army Sergeants Major Academy.

Combined Arms and Services Staff School. An intense 9-week course, the CAS3 is designed to provide captains with the professional skills necessary to serve successfully as a staff officer at battalion, brigade and division level. Studies of officer professional education and training recognized a critical need for training in unit staff skills. In FY 86, 2,400 captains will complete CAS3. In FY 87, the training load will increase to approximately 4,500 students per year, providing all captains with the opportunity to gain this highly effective training experience.

Operating Tempo. OPTEMPOs are established for intensively-managed systems and reflect the required rate of use to achieve projected annual training. The rates are expressed in terms of miles per year, hours per year, or other appropriate units of measure per system.

OPTEMPO is a newly instituted management process that will assist in quantifying the relationship between resource levels and readiness. Budget constraints have forced an overall reduction in OPTEMPOs since FY 85. While the rates remain adequate to sustain readiness levels, further reductions may impact negatively on readiness.

Training Ammunition. The Standards in Training Commission (STRAC) established uniform weapons training standards and supporting resources for the Army. The development of STRAC has already resulted in reductions in forecasted ammunition needs. The standards and strategies in STRAC provide the Army with a valid rationale for training ammunition requirements, improving the means by which related dollars are justified. The FY 86 ammunition budget protects training readiness and reflects full caliber ammunition cost savings through the use of devices and simulators. However, in an era of declining resources, requested funding for FY 87 and beyond is well below STRAC requirements.

Device Based Training. The Army has developed and fielded technology-based training devices, simulators, and simulations which are revolutionizing the way soldiers and units train. These tools permit commanders to sustain higher levels of unit proficiency at less cost and provide training feedback previously not available. These devices are increasingly integrated into initial entry and unit sustainment training programs, with special emphasis on providing simulations to the RC.

Many of the recent investments in training technology do not provide an absolute tradeoff in OPTEMPO, but serve essentially to improve training effectiveness and to compensate for increased operating costs of modernized systems. For instance, the Multiple Integrated Laser Engagement System (MILES) and the instrumentation at the National Training Center allow objective evaluation and permit critique of individual and collective tasks—areas of increasing importance and technical complexity.

OPTEMPO was decremented from a level of 1,000 miles per tank per year in FY 84 and earlier years to approximately 850 miles in FY 85 and beyond. This reduction is based on a number of factors—investment in simulations, budget constraints, refinements of modeling techniques, and other changes. Near-term offsets to support investment in simulators have concentrated more on procurement accounts such as ammunition than on operating and support costs. However, simulators that offer potential as OPTEMPO surrogates are now beginning to be fielded. These include: Unit Conduct of Fire Trainer (UCOFT), and Army Training Battle Simulation System (ARTBASS).

The UCOFT, a computer driven visual scene simulator for gunnery skill training, provides the best example of this situation. Two years after UCOFT is fielded to each MI tank battalion, each tank is decremented 34 main-gun rounds. The cost differential associated with this reduction is shown below.

UCOFT COST AVOIDANCE

TYPE OF ROUND	ROUNDS REQUIRED/ TANK/YEAR	COST ROUND*	# TANKS/ BATTALION	COST AVOIDANCE PER BATTALION PER YEAR
105MM				
TP T	14	$132	58	$107,184
DS TP	20	$168	58	$194,880
				$302,064
120MM				
TP T	14	$1,278	58	$1,037,736
TPCSDS T	20	$854	58	$990,640
				$2,028,376

*FY 86 PROJECTED COSTS. AS MORE 120MM ROUNDS ARE PRODUCED PRODUCTION WILL BECOME MORE ECONOMICAL AND UNIT COSTS WILL DECLINE

Figure 2.14

Further, annual cost avoidance associated with UCOFT fuel and maintenance costs is estimated at $320 thousand per battalion. Most important, however, these simulators provide soldiers training opportunities transcending the constraints associated with full service firing.

The family of flight simulators is also illustrative of the cost avoidance gained by the intelligent integration of this technology in aviation training.

AVIATION SIMULATORS COST AVOIDANCE

DEVICE	SIMULATOR COST/HOUR	AIRCRAFT COST/HOUR*	RATIO OF SIMULATOR COST/HOUR TO AIRCRAFT COST/HOUR
UH-1	40.00	481.00	8.1%
UH-60	117.00	1509.00	7.7%
AH-64	276.00	3714.00	7.4%
AH-1	407.00	1240.00	32.8%

*FY86 RATES

Figure 2.15

Other high payoff training devices are the Remote Target System, which is the target mechanism component of the Army's Range Modernization Program; the Air Ground Engagement System, MILES for aircraft and air defense weapon systems; and MILES for M1/M2/M3. Several emerging training simulators appear to have tremendous potential for more efficiently enhancing unit proficiency. As an example, the Tank Weapons Gunnery Simulation System is a precision laser device used with tanks and Bradley Fighting Vehicles. This device will allow tankers and infantrymen to practice gunnery by firing a precision laser beam at targets rather than expending live ammunition.

MILES has been a success in training tactics. While MILES has provided unparalleled opportunities for realistic, two-sided, tactical training world-wide, true combined arms tactical engagement training is being sought. Efforts to incorporate the simulation of field artillery indirect fire, mines, and NBC area weapons effects into MILES exercises will improve tactical engagement training.

Simulation Networking (SIMNET) is strongly supported by the Army in an effort to make up training shortfalls caused by reductions in the OPTEMPO of maneuver forces. SIMNET will interconnect large numbers (up to battalions) of low cost combat vehicle simulators in two-sided, free play tactical engagement simulation.

Battle simulations provide an efficient method of training soldiers, unit commanders, and staffs. However, simulations currently available to commanders are either manually driven or very labor intensive automated systems. There are no standard, computer-driven simulations at corps or division level. Brigade through crew simulations are inefficient and often do not operate in real time. However, improvements in battle simulation are underway. ARTBASS is a computer-driven simulation which provides a highly realistic environment to train battalion commanders and their staffs in the control and coordination of combined arms operations. ARTBASS fielding has begun.

The FY 87 budget reflects the Army's continued commitment to exploit the capabilities of training devices and simulators to provide realistic training with the potential to achieve long term economies by funding efforts to simulate indirect fire; expanding MILES use to RC units and to more types of weapon systems; continuing production of the Conduct of Fire Trainer and Flight Simulators; and funding efforts to substitute training devices and simulators for live fire.

Our major thrust in the development of new training devices is to develop equipment that allows a high transfer of knowledge and experience from the training situation to a combat situation.

Automated Training Information. An automated training management system responsive to the planning and resource needs of units from battalion through Department of the Army is under development. ADEA has continued development and definition of the Integrated Training Management System (ITMS). Assessment, conceptual definition, and functional description of the system have been completed. Also, approval has been granted to initiate a competitive contract action for the prototype, test bed validation of ITMS in the 9th Infantry Division (Mtz).

Training Facilities. To meet the complex training challenges for both AC and RC units, programs are underway to develop efficient and productive facilities. Begun in 1982, the Army Range Modernization Program has matured into an effective management system to field range systems in support of modernized weapons and training requirements. The Multipurpose Range Complex is the keystone facility which provides a challenging gunnery experience for tank and mechanized infantry units up to platoon level. Eleven of the 14 planned ranges will be under construction or completed by FY 87. The Military Operations on Urbanized Terrain (MOUT) facilities provide individual and collective training for this difficult contingency. Twelve MOUT complexes are planned; two additional facilities will be completed or under construction by FY 87. The Army has made a significant investment in range construction.

($ in millions):

FY 84	FY 85	FY 86	FY 87
107	76	112	63

Three important training facility programs for the RC are: A Regional Training Center (RTC), Regional Maintenance Training Site (RMTS), and Regional Training Site-Medical (RTS-MED). The RTC, planned for Fort Dix, New Jersey, will be a test-bed facility for developing combat arms, combat support, and combat service support soldier and leader skills through a device-based training strategy. The RMTSs will be located in areas with a high density of non-divisional maintenance units. Pilot RMTSs are scheduled for Camp Shelby, Mississippi and Fort Bragg, North Carolina during FY 86. Twenty-one RMTSs will become operational between FY 86 and FY 90. The RMTS will be the keystone in transition and sustainment training for the RC non-divisional light and heavy equipment maintenance personnel on the repair of current and force modernization equipment. For many units, the RMTS will provide the only opportunity they will have to train on modern equipment before deployment to the theater of operations. The RTS-MED will provide ARNG medical units with complete sets of deployable medical systems hospital equipment for training.

National Training Center. The National Training Center (NTC) at Fort Irwin, California, is the Army's key facility for training mechanized and armor task forces. In FY 85, the NTC reached its sustainment level of 28 battalion rotations per year. Army National Guard roundout battalions also receive the benefit of the NTC experience. Five units trained alongside their active partners in FY 85, two more are scheduled in FY 86, and two are projected for FY 87. Improved unit performance at NTC manifests the significant positive impact of the NTC on Army training. The implementation of the NTC Five Year Plan in FY 87 will bring some important improvements. The brigade headquarters and supporting elements will be more fully integrated into the exercise and evaluation. Air Force tactical air participation, already extensive, will be integrated into the instrumentation system.

Another important initiative is the inclusion of four light infantry battalions each year. This program prepares those units for high intensity combat and teaches the heavy and light forces to work together on the battlefield.

Reserve Component Training. Initiatives are underway to improve training of the RC to prepare units better to execute their wartime mission. The Key Personnel Upgrade Program (KPUP) develops key personnel within ARNG units through direct association during additional training periods with a counterpart AC officer or NCO. The program provides ARNG officers and NCOs practical experience in a tactical environment. The USAR operates a readiness training program for skill qualification. This program places members of the IRR on periods of voluntary active duty with an AC unit in positions appropriate for their grades and mobilization specialties.

The Capstone Program orients RC commanders to their wartime organization and provides the opportunity to train with active counterparts. The Overseas Deployment Training (ODT) Program enables high priority RC units to train in their contingency areas with their wartime gaining command. The ODT program has increased from 26 units and cells in 1976, the first year of the program, to over 1,900 units and cells for FY 85. Selected units trained up to 26 days in Joint Chiefs of Staff (JCS) exercises working alongside their AC counterparts. Projections indicate that nearly 2,000 units and cells will participate in FY 86, including the 32nd Infantry Brigade, Wisconsin ARNG which participated in REFORGER FY 86. During FY 87, 1,280 units and cells have been approved. As long as JCS exercise funds are provided, funding will support the current level of RC participation in ODT.

The Army Exercise Program. The overall Army exercise program includes both unilateral and joint and combined exercises. Unilateral exercises are generally sponsored and conducted at corps level and below. Major joint and combined exercises are coordinated and sponsored by the JCS or one of the unified commands under the auspices of the JCS Exercise Program. The levels of Army commitment of troops and support to the exercise schedule is governed by availability of forces to meet troop list requests, the sufficiency of support funds and the relative value of the activity as a training vehicle or instrument of national policy.

Deployment exercises provide invaluable training to CONUS-based units. Troops and equipment are deployed and exercised in Europe, Southwest Asia, Central America, Korea and the Pacific. In FY 87, the Army will participate in over 45 JCS directed or coordinated exercises. However, sharp reductions in joint exercise support funds were made for all commands except U.S. Southern Command. The total exercise program for FY 87 will be funded at 15 percent lower than the FY 85 program and 7 percent lower than the FY 86 program. Participation levels for FY 87 exercises have been adjusted to meet the lower funding levels. The major impact is the reduced level of Forces Command (FORSCOM) support.

Joint training and interoperability objectives have been established for each exercise to ensure that forces have sufficient time to develop supporting objectives and conduct preparatory training. RC participation for specific exercises is identified at least two years prior to execution.

- REFORGER 87. The largest group of CONUS-based forces (28,000) ever to participate in REFORGER will be deployed, draw POMCUS, and conduct a field training exercise. The REFORGER series demonstrates rapid reinforcement of NATO and U.S. warfighting capabilities, improves NATO interoperability, and exercises general defense plans. In FY 87, RC involvement will be extensive since the majority of all exercise combat service support will be provided by RC units.

- Team Spirit 87. This exercise improves the combat readiness of the Republic of Korea and U.S. forces through joint and combined training that includes strategic and tactical deployments and the reception and use of U.S.-based augmentation. Augmentation forces will include brigade size forces from the 25th Infantry Division and the 7th Infantry Division (Light), special operations forces and a considerable number of RC units with combat service support missions.

- Kindle Liberty 87, Cabanas 87, Blazing Trails 87, and Ahuas Tara 87. These joint and combined exercises will deploy CONUS-based active and reserve forces to Central America under the sponsorship of U.S. Southern Command. Deploying forces will be integrated with forward deployed U.S. and host nation forces and will conduct field training exercises that emphasize counterinsurgency operations. These exercises improve the training of both U.S. and friendly forces while maintaining a U.S. presence in the region and providing a means to deter aggression.

- Bright Star 87. This is a large scale U.S. Central Command exercise that will deploy CONUS-based forces to various countries of that command's area of operations. The exercise will emphasize rapid deployment, mobility, host nation agreements, combat readiness and extensive integration of RC units.

DEPLOYING AND MOBILIZING THE ARMY

The Army mobilizes and prepares for war in concert with the other services, by developing a capability to expand and deploy the required personnel, supplies and equipment needed to respond to any crisis. Planning for this capability involves continued refinement of policies and procedures to ensure adequate manpower and logistics arrive in-theater at the required place and the proper time. The ability to mobilize rapidly and effectively is an important element of deterrence and is critical to successful warfighting. Planning for mobilization must complement operational planning and include military mobilization, industrial responsiveness and crisis management. Mobilization must be integrated with all DOD planning and exercise activities.

Recent developments include a system to improve the Army's rail capability to support mobilization and deployment; a program to ensure Military Occupational Specialty (MOS) training for designated Individual Ready Reservists; testing of Rapid Erectable Light Mobilization Structures to offset increased requirements for facilities during mobilization; plans for establishing and operating the minimum forward stationing forces in a shortfall area to plan, coordinate, receive and sustain reinforcing divisions and establish community support; and development and testing of new logistics doctrine and procedures for Army units, the sustaining base, and battlefield support systems.

Mobilizing the total force will continue to be of highest priority. In FY 78 the ARNG began an exercise program, complementary to the JCS exercise program, to evaluate mobilization and deployment preparedness of high priority units. In FY 85 nearly 600 exercises were conducted involving almost 1,400 ARNG units. Beginning in FY 87 the USAR will begin similar exercises of early deploying units.

Strategic Mobility. The ability to meet time sensitive force and sustaining supply delivery requirements is critical to the Army's global deployment mission. We remain vitally concerned about the adequacy of airlift and sealift resources and continue to support fully the Air Force and Navy in their efforts to improve total strategic mobility capability. Improvements in both of these areas are being made. We have formalized our joint commitments to work together to define the requirements and to identify the programs which will most efficiently meet those requirements. These commitments are embodied in Memorandums of Agreement we have entered into with the Air Force and the Navy. Despite these coordinated efforts, progress in resolving strategic lift capability shortfalls is slow, and the solutions are expensive. Our efforts are further complicated by the continuing decline in the capability of the civil sector, primarily the U.S. Merchant Marine, to support our wartime needs.

Adequate strategic airlift is most critical in the early days of a war or crisis. Figure 2.16 illustrates projected strategic airlift program capabilities through FY 91, expressed in millions of ton miles per day (MTM/D).

The FY 91 program will result in approximately 48 MTM/D of capability against a recognized long term requirement of 66 MTM/D. The resulting shortfall of approximately 18 MTM/D will be reduced significantly by fielding the C-17 Airlifter which is scheduled for initial operating capability in FY 92. In addition to reducing the overall strategic airlift shortfall, this versatile aircraft will provide essential outsize airlift capability, reduce the intratheater airlift shortfall, provide a needed replacement for the C-141, and augment the C-130 fleet. In the near term, airlift capability is being improved by "rewinging" the C-5A fleet, acquiring 48 C-5Bs and 44 additional KC-10s, improving wartime aircraft utilization rates, extending the service life of existing aircraft, and limited enhancement of the capabilities of the Civil Reserve Air Fleet.

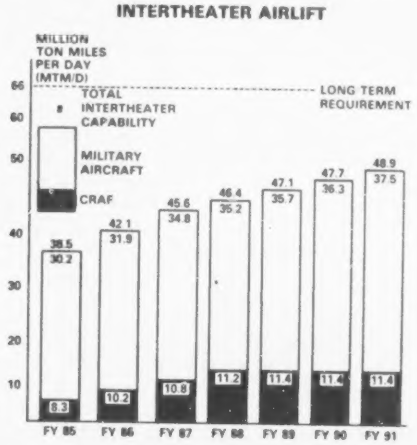


Figure 2.16

Strategic sealift is critical to the deployment of Army forces and sustaining resupply. The continuing decline of the Merchant Marine fleet, and the industry trend toward containerization and away from more militarily useful breakbulk shipping, requires an innovative look at the scope and direction of strategic sealift programs. Figure 2.17 portrays the decline in the number and capacity of militarily useful general cargo ship capacity in the U.S. Merchant Marine from 1970 to 1990. The importance of an active program to respond to this decline cannot be overstated. The Navy, with our support, is meeting this challenge through a combination of programmed increases to the U.S. Ready Reserve Force and enhancement programs to allow container ships to be modified to support unit equipment movement requirements.

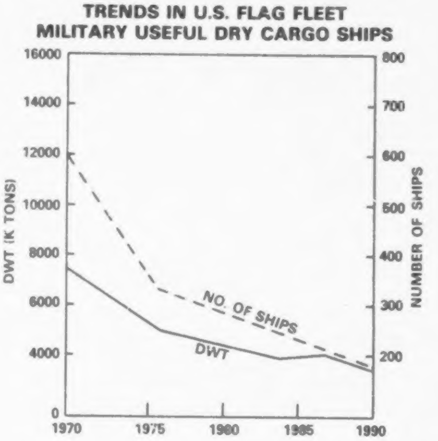


Figure 2.17

Figure 2.18 illustrates the impact these programs will have on total unit equipment surge shipping capability by FY 91. Two significant points must be noted. First, we are incapable of meeting our total surge requirement; and second, unless the decline of the U.S. Merchant Marine Fleet is halted or reversed, or new ideas are developed, our capability will decline further.

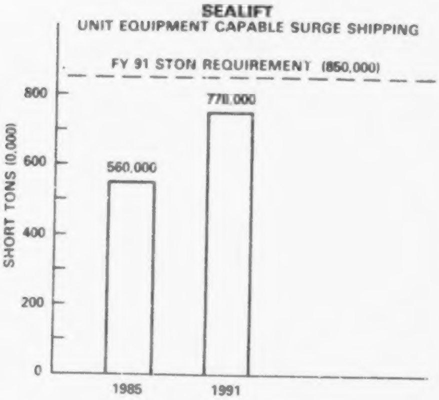


Figure 2 18

Specific Army programs are also intended to have a positive effect on overall mobility requirements. Most important in this category is the light division initiative. The light divisions are designed to be air deployable in far fewer C141B-equivalent sorties than the standard infantry division design. Their rapid deployability and high combat to support ratio characteristics may well preclude the later necessity to deploy a larger, more costly force. We are also aware of the need to address transportability as a critical factor in new equipment design. Modernized equipment, no matter how capable, is ineffective unless it can be efficiently transported to the theater and enhance battlefield mobility.

The Army's land and sea based prepositioning programs serve to reduce the total lift requirement by reducing the overall quantity of materiel requiring shipment, as well as the distance to be traveled from the prepositioning site to the area of operations. For example, Army readiness is being improved by the prepositioning in early FY 86 of combat service support equipment aboard a Heavy Lift Prepositioning Ship. Prepositioning combat service support equipment afloat in Southwest Asia was identified in the DOD Sealift Study as the best means for reducing early strategic lift requirements. The 8,000 tons of equipment aboard the Prepositioning Ships will be required to unload early arriving equipment and supplies arriving from Diego Garcia and fast sealift deploying from CONUS in support of U.S. Central Command contingencies. The combat service support equipment will provide the Logistics-Over-the-Shore (LOTS) capability necessary to unload material in areas where port facilities are limited or non-existent. Most of the equipment on the Heavy Lift Prepositioning Ship is difficult to deploy and could not be deployed by surface in time to meet force closure requirements.

Finally, working under the auspices of an Army-Navy Memorandum of Agreement, programs to balance Navy strategic sealift and Army-Navy offload and discharge systems are well underway. Navy fielding of Fast Logistics Ships, flatracks and seasheds, the Auxiliary Crane Ships, the Heavy Lift Prepositioning Ship and the expansion of the Ready Reserve Force have all contributed to reducing strategic sealift shortfalls. The Army has programmed discharge capability to match the Navy's delivery profile and satisfy the minimum LOTS requirement. Programs include modernization and upgrade of the Army's watercraft and tugboat fleet and the joint acquisition with Navy of causeway systems designed to make watercraft more useful in those areas of the world where shallow beach gradients limit LOTS operations. These joint efforts provide better systems and produce more capability per dollar expended.

Failure to fund strategic mobility programs and cargo offload systems will restrict the United States' ability to meet its global commitments in a timely manner. Without significant strategic lift the effectiveness of the Army as an instrument of U.S. national security policy is greatly inhibited.

Prepositioned Materiel Configured to Unit Sets. POMCUS is organizational equipment stored in company and battalion size packages, in a ready-for-use condition. The purpose of POMCUS is to position the majority of a unit's organizational equipment forward, so that in time of crisis only unit personnel, with minimum equipment, will require airlift to meet the requirements of a NATO contingency. During REFORGER 85, 3,250 vehicles (2,339 wheeled and 911 tracked), plus 1,677 trailers were drawn from POMCUS. Over 98 percent of the vehicles were operational when drawn. This high number of operational vehicles is evidence of the effectiveness of the POMCUS program.

The concept of POMCUS began in 1961. The Army POMCUS program is for six division sets of equipment. The site for the last set has been completed and the equipment fill for the sixth division set has begun.

Joint Deployment System. The Joint Deployment System (JDS) is a crisis execution system specifically designed to support coordinated, time-sensitive deployment planning and execution. It has been developed in response to critical deficiencies identified in major mobilization and deployment exercises since 1978, which focused on the need for centralized deployment management.

The baseline JDS was released world-wide in September 1985. This marked the transition of JDS from a prototype to an operational system, and concluded a four-year developmental effort. Fielding of the operational JDS provides the joint community with a powerful new capability to control and monitor the deployment of military forces. However, it also places additional manpower demands on commands and agencies involved in deployment planning and execution. Future demands for additional resources are expected as experience in JDS increases.

Transportation Automation. A major challenge exists to maximize peacetime, mobilization, and wartime transportation automation capabilities. As a result, a number of new transportation automation systems have been developed.

Recent progress has seen the successful testing of the Transportation Coordinator Automated Command and Control Information System (TC ACCIS) prototype, the Software Acceptance Test for the DA Standard Port System-Enhanced, the initial capability for the Installation Transportation Office/Military Transportation Management Command (MTMC) interface module of the MTMC's Crisis Action Management System, and the beginning development of the Container Management System.

Fiscal Year 87 initiatives will focus on systems which will generate timely, critical management information and will reduce manpower requirements within the logistics arena. Both of these objectives will be served by the continued development of the TC ACCIS Army standard version, the development of the Army standard version of the Automated Airload Planning System, the deployment of the Container Management System, the fielding of MTMC's Computerized Deployment System, the completion of the remaining modules of MTMC's Crisis Action Management System, and the development of the DA Movement Management System-Redesign. Full funding of these programs during their development is critical to ensure continuity and timely fielding.

Army National Guard Mobilization and Deployment Exercise Program. A formal mobilization exercise program was established in the ARNG in 1978. It is a multifaceted program geared to full participation in the JCS five-year exercise plan as well as participation in the actual mobilization process through unit level exercises.

In FY 85, for the first time, the level of funding provided not only for participation by early deploying units, but also for many of our major combat units. In FY 86, the program will be extended to all ARNG units.

Funding requested in FY 87 will provide for over 700 mobilization and deployment exercises in which ARNG units and personnel will have the opportunity to learn the mobilization process and evaluate mobilization preparedness.

U.S. Army Reserve Mobilization Exercise. During FY 87 the USAR will participate in an annual mobilization exercise which will exercise early deploying units. These units include those designated for early reinforcement of NATO, U.S. Central Command, and the theater defense brigade.

Individual Ready Reserve. The IRR is the largest of the Reserve categories of pre-trained individual manpower. The personnel assigned to this group will be used to bring AC and RC units to wartime required strength during periods of mobilization.

Strength of the IRR has long been an issue since the Army does not actively recruit personnel to be placed in this category. The program of transferring personnel into the IRR to complete their Military Service Obligation (MSO) has resulted in significant IRR growth. To enhance this growth, Congress authorized an increase to the MSO from six to eight years and provided funds for a reenlistment bonus. These two initiatives should result in the following growth in the IRR over and above the normal transfer program.

(NUMBER OF PERSONNEL IN THOUSANDS)

INITIATIVE	FY 87	FY 88	FY 89	FY 90	FY 91
8yr MSO	–	–	–	24.6	78.0
IRR Bonus	7.5	7.5	7.5	7.5	7.5
TOTAL	7.5	7.5	7.5	32.1	85.5

Congress has directed the Army to muster a portion of the IRR in 1986 to determine its availability and fitness for duty. A muster was held in January 1986. During this voluntary assembly, the IRR personnel went to a military facility close to their home, updated their personnel information, were physically screened, and received a briefing about reserve responsibilities and opportunities. Plans are being developed for an involuntary muster of major proportion during FY 87.

Current strength of the IRR as of 30 September 1985 is 301,825. It is projected to grow to over 505,000 by FY 92.

Individual Mobilization Augmentee Program. The Individual Mobilization Augmentee (IMA) Program grew out of the old Mobilization Designation Program. In October 1981, the participants were reassigned from the IRR to the Selected Reserve. As Selected Reservists, they are subject to the Presidential 100,000 call-up authority.

IMA, while Selected Reservists, are actually preassigned to AC units and organizations. Personnel assigned to IMA positions may also receive professional development training or take additional skill training in an effort to develop increased proficiency.

With the continuing cap on Active Army end strength, the IMA program, which numbered 11,922 as of 30 September 1985, can provide significant assistance in filling out active units and agencies.

Retiree Recall Program. The Army's retiree recall program was developed to offset the shortfall in pretrained individual manpower that would occur upon mobilization. Program goals are to provide mobilization manpower; to release AC individuals for reassigment or deployment as retirees become job proficient; and to provide CONUS base sustainment during the early days of mobilization. The program was implemented in August 1981 with the first "hip pocket" mobilization orders issued in November 1981. Presently, 130,000 retirees have been preassigned to CONUS installations. USAREUR has 4,100 preassigned retirees and Korea has 185.

The Army conducted the first exercise of its retiree recall program at Fort Jackson, South Carolina in October 1984. The test recalled 100 retirees from the surrounding area.

SUSTAINING THE ARMY

The Army has diverse and wide-ranging requirements for sustainment. This requires innovative approaches in organization, equipment and procedures. Better feeding systems, tactical water support, bulk petroleum distribution, war reserves and improved mobility provide increased staying power to continue the battle. Initiatives to improve equipment durability, organizational clothing, chemical defense equipment, maintenance and repair parts support address other sustainment needs of the Army. Several initiatives are underway to reduce the combat service support shortfalls. Forty-one units are scheduled for activation in the RC between FY 86 and FY 90. As logistics unit productivity systems are fielded, the spaces made available by increased efficiency are being applied to raise the authorization of combat service support units. Recent analysis applied 1,800 spaces to raise the authorization level of active combat service support units in the M + 10 essential force. The underlying approach to ensure improved productivity for soldiers and equipment drives efforts to provide a balance of sustainment capabilities.

War Reserves and Sustainability. War reserve stocks are established in strategic locations world-wide to provide an immediate supply of munitions, fuel, and major and secondary items during the initial days of combat for consumption until the supply pipeline can be filled from CONUS depots and manufacturers.

Modernization and changes to the force structure cause constant adjustments to stockage levels. Modernization provides new, more effective equipment resulting in overall sustainment gains. However, modern equipment requires different support items. The requirement to sustain a mixed fleet of older and modern equipment results in additional resource requirements. Although there has been steady improvement of the war reserve posture over the past several years, funding constraints, coupled with increasing and changing requirements, have prevented the Army from meeting its goals.

To achieve total war reserve stockage objectives based on funding alone, an overall investment of more than 15 times the current funding is required. One additional day of war reserve stocks costs about $1 billion.

Medical Readiness. Medical readiness is a measurement of the Army's ability to provide wartime medical support. It has been severely limited by a shortage of medical equipment and professional medical personnel needed to support wartime requirements.

In FY 84 and FY 85, 40 hospital sets were funded for procurement; these sets are the first to be configured with the new Deployable Medical Systems requirements. Fielding of the 13 hospitals acquired is projected to begin in 3rd quarter, FY 87. In FY 86 and FY 87, 45 hospital sets will be funded. Funding to equip the remainder of the medical force structure by FY 91 is programmed. Fielding of that equipment is projected to be completed within two years of funding.

Progress has been made to alleviate the critical shortage of professional personnel in certain specialties. The development of recruiting enhancements and new incentives are designed to attract and retain professional medical personnel in both the AC and RC. Personnel support to a deployable medical force would be adequate to provide care on a world-wide basis, though shortages of surgically related specialists (physicians and nurses) would exist in CONUS.

The CONUS Army medical support base has shortfalls in facilities and materiel to provide sustainment to committed forces. In the aggregate, the Army has sufficient capability to handle CONUS-generated patients for the first 30 days of a mobilization. However, inadequacies exist in health care support at semi-active and state operated installations which require either early mobilizing, late deploying medical units or other health care means to provide base support medical care to the mobilizing population. These shortfalls dictate a great reliance upon the Veterans Administration and the National Disaster Medical System for the care of evacuees from overseas.

Distribution of Bulk Petroleum. Distribution of bulk petroleum is one of the most critical elements of readiness and sustainability. The Army has the responsibility for petroleum distribution to all services in both a developed and undeveloped theater. It is the Army's mission to maintain a flow of bulk fuels from a combination of off-shore and pier-side tanker discharge systems through a network of on-shore storage and distribution systems.

Petroleum distribution equipment contained in the Army Facilities Component System (AFCS) is 30 to 40 years old, labor intensive and no longer commercially available. The Army is in the process of updating the AFCS and has programmed funds to improve petroleum products off-load and inland distribution through use of commercially available equipment. This equipment is quick and easy to install, increases unit productivity and reduces force structure shortfalls. Procurement of light weight aluminum pipeline, quick lock couplings and improved storage capabilities has begun.

An Army-Navy work group has been established to coordinate joint procurement and fielding of a common offshore petroleum discharge system including required documentation, doctrinal development and integrated logistics support.

Testing of ship-to-shore undersea pipeline and commercially available single anchor leg mooring systems was successfully completed in July 1985. A full system demonstration, including timed test, was successfully completed in October 1985. The Army has budgeted for acquisition of these systems in FY 86-87.

Tactical Water Support. The Army, as DOD Executive Agent for Land Based Water Resources Management in contingency operations, has developed, in close coordination with the other services and applicable DOD agencies, concepts and doctrine for water support.

Tactical water support is a critical element of sustainability. Resources are required to provide water detection, production, treatment, storage, distribution, cooling and force structure support to U.S. Central Command forces in an arid environment. Equipment procured with prior year funds is being delivered and has been used to establish a training program at the NTC and the U.S. Army Quartermaster School. Additionally, equipment has been issued to deployable units authorized specific items, used to establish a training base for exercises, and stored as FORSCOM operational project stocks in support of Central Command requirements.

Research Department Explosive and High Melt Explosive. A master plan for the improvement of Research Department Explosive and High Melt Explosive (RDX/HMX) readiness was developed and forwarded to Congress. This plan was prepared as a result of an Army study on insensitive high explosives. The study highlighted shortfalls in the ability to provide explosives in emergency and mobilization conditions. The plan provides for the modernization and expansion of the Holston Army Ammunition Plant, Tennessee, establishment of additional RDX/HMX facilities and for the stockpile of RDX/HMX explosives. The FY 87 budget continues modernization at Holston (A-5 lines), and procures RDX/HMX explosive stockpiles.

Reichel Logistics Facility. In the late 1970s, analysis of the evolving threat to Europe's Central Region concluded that Northern Army Group (NORTHAG) would be defending against the most probable main attack of the Warsaw Pact. As a result, the United States agreed to reinforce this area outside the traditional U.S. area of operations. Concurrently, we made a national commitment to develop the capability to reinforce NATO with ten divisions within ten days. The Reichel facility is ideally located and suited to provide a cost effective logistical support coordination center necessary to accomplish reinforcement objectives in the NORTHAG region.

Congress has appropriated funds to transport and preposition war materiel in the NORTHAG area, and has authorized purchase of the Reichel facility. However, approval for obligation of funds has been withheld until completion of a study to determine the feasibility of closing or consolidating selected overseas facilities. Failure to purchase this facility precludes its full use and severely impedes the total process of development of the war plan. The Reichel facility also serves as a community support base for approximately 5,000 military personnel and family members in and around the Rheinberg community area. Present community facilities are woefully inadequate and our personnel are experiencing substantial hardships. This project remains USAREUR's highest priority for Military Construction funding.

Depot Maintenance Activities Unfinanced Requirements. Depot maintenance activities provide for the materiel overhaul, conversion, modification, repair, and renovation, as well as maintenance engineering, technical assistance, update of publications and new equipment training for the Army. The unfinanced requirements (backlog) associated with the materiel portion of the program is defined as that portion of the total executable requirement that cannot be funded with available resources. This backlog of the current year is cumulative and becomes an integral part of the following year's requirement. There is no backlog, as such, related to the maintenance support activities portion of the program which requires the restructuring of its total requirement yearly. The Army has made every effort to bring the Depot Maintenance Activities program to a zero unfinanced requirement. This was achieved for the depot materiel maintenance program in FY 82 and again in FY 86. However, constraints in funding have made this goal unaffordable for FY 87. Through the five-year period to FY 91 the Army is attempting to achieve a minimum of 93 percent of the executable program requirements throughout these program years. The depot materiel maintenance unfunded requirements are strictly a function of funding versus requirements. There are no backlogs in the FY 87-91 period generated by manpower shortfalls. The unfinanced requirements consist primarily of major end items. This is done to protect the repair of secondary items. The repair of secondary items provides more near term readiness by ensuring that major items which can be repaired below depot level do not remain unserviceable for lack of major components. The FY 87 budget holds the depot materiel maintenance unfinanced requirement at $93 million, 5.4 percent short of total requirement. The maintenance support activities are held at $340 million or 34 percent short of its FY 87 total requirement. As new and more sophisticated equipment continues to be added to the Army's inventory to increase combat readiness and effectiveness, the total Depot Maintenance Activity requirement continues to grow.

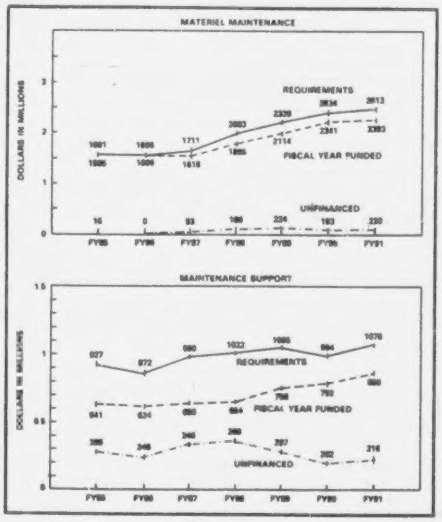


Figure 2.19

STEWARDSHIP OF RESOURCES - RESPONSIBLE AND INNOVATIVE

The combination of a high quality, lean Army and the most extensive peacetime modernization in history focuses attention on the stewardship of resources. The Army's most important resource is its soldiers. Programs to ensure those soldiers have a quality of life that encourages excellence and that systems and organizations are designed to take maximum advantage of the quality of those soldiers are imperative. In addition to taking care of the needs of soldiers and families, the Army is providing responsible stewardship of resources. Through such efforts as pursuing productivity enhancing technology, providing more relevant combat power within constrained active end strength; trimming staffs; transferring appropriate missions and capability to the Reserve Components (RC); reexamining acquisition of equipment; taking innovative steps in information and resource management; and rationalizing the integration of soldiers, equipment, doctrine, and organizations into effective combat power, the Army is providing the leadership necessary to use resources efficiently and effectively.

A critical element of stewardship is jointness. This cross-service cooperation is institutionalized in the Army-Air Force Joint Force Development Process (JFDP). The JFDP stems from the recognition that no service has the resources to do everything that needs to be done. Achieving maximum combat capability from each defense dollar spent requires a joint service approach to force development, capitalizing on each services' inherent strengths and capabilities to meet effectively and efficiently the requirements of all.

A major accomplishment of the JFDP has been the termination of duplicative programs, with resulting near term cost avoidance. For example, the services restructured the Joint STARS program to seek opportunities for innovation and cost reduction, selected the C-18 platform to meet surveillance and attack needs, and terminated the Army's OV-1 Joint STARS modifications. Three JFDP initiatives address Air Base Ground Defense (ABGD). Air Force requirements for ABGD outside the base perimeter will be met by the Army; additionally, the Army will conduct training for Air Force security police in internal base defense. Consequently, the Air Force reduced its planned RC force by 3,300 spaces, terminated the Mobile Weapon System, and cancelled plans for 12 regional training centers. A further example of cost avoidance is cancellation of the Army's Airborne Radar Jamming System. The services have jointly developed procedures for use of existing Air Force assets to protect Army helicopters from enemy air defenses. The net result of one service supporting both services' requirements has been near term cost avoidance totalling hundreds of millions of dollars.

JFDP emphasis for the future is on institutionalization and expansion. The FY 87 budget is the first fiscal demonstration of the services' joint approach to force development. Because of the services' emphasis on development of complementary rather that duplicative capabilities, the budget now reflects more multiservice programs. It reflects procedures developed by all four service programmers to coordinate more fully our future programs. The other significant element of JFDP institutionalization will be the expansion of the Army-Air Force staff officer exchange program to include Navy participation and exchange officer representation in all major service staff functional areas. A positive step in fostering inter-service cooperation and understanding, this program is developing a pool of officers with unique experiences who can be tapped in the future for key joint assignments. The JFDP focus on operational issues necessarily includes assessments of other critical areas such as strategic deployment, sustainment of forces, and command and control. The Army and Air Force continue to pursue expanded Navy and Marine Corps involvement in areas of mutual benefit. Finally, recognition of the four-service applicability of many aspects of the JFDP is reflected in ongoing efforts to foster closer affiliation in the future with formal JCS processes.

Leadership is the essential element of readiness and stewardship of the force. The Army seeks to develop leaders with the highest ethical and professional standards. These leaders are committed to mission accomplishment and the well-being of subordinates. General George S. Patton, Jr. said, "Wars may be fought with weapons, but they are won by men." The human dimension is always critical in battle and the demands of modern war make the development of competent leaders during times of peace even more critical. We must have leaders at all levels who can exercise initiative and act independently to employ our forces effectively. We must prudently use our most precious resource—our soldiers—and employ our weapons systems and other resources for their greatest effect. Good leaders are essential for stewardship of the force. Part of that stewardship is enhancing the readiness of the force through sound preparation and training during peacetime.

Our effectiveness in peace and war depends on the professional competence, imagination, and integrity of Army leaders from the most senior to the most junior.

THE QUALITY OF LIFE FOR SOLDIERS AND FAMILIES

The Army Family. The impetus established during 1984, "The Year of the Army Family," carried through 1985 into 1986 as the Army continued to provide visible support of its commitment to Army families. The following examples illustrate some of the efforts that have been undertaken by the Army, with congressional support, during the past year.

A new sponsorship program was initiated. The objective is to ease stress associated with relocation and provide soldiers, Army civilians, and family members with information, advice and support to help newcomers get settled quickly and begin to feel at home in a new environment.

Improvements made in employment assistance and referral programs make it easier for Army family members to find jobs when moving to a new duty location. Family members of military and civilian employees serving in non-permanent positions overseas receive non-competitive consideration for civil service positions upon return to the United States. Working family members may register for priority consideration in CONUS when they relocate with a sponsor. Increased publicity of employment opportunities also has been provided. In addition, non-appropriated fund employees may now be reinstated to a non-appropriated fund position at a new location within six months of separation from a former assignment. Revised guidance has been issued to increase the emphasis and reduce barriers to the employment of family members in part-time, job-sharing and summer hire programs. Sixty-five Army locations have employment information centers in various stages of development providing consolidated federal, state and local employment information. The Army has been the leader in family member employment and is committed to even further advancement.

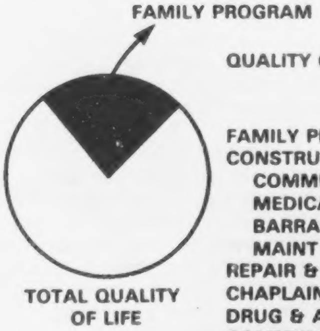
Recognizing the important contributions of the ARNG and USAR, the Army developed and began issuing reserve family member identification cards. While the cards themselves provide no benefits, they will make identification at installations easier and increase the partnership bond between the Army and this group of family members.

We are determined to do everything we can within available resources to improve the quality of life for our soldiers and families. The Army knows that stronger families make for a more ready Army. With the help of Congress, the Army can sustain this effort, and continue the progress. Our FY 87 budget addresses high payoff issues that require additional funding. The chart below depicts the resources required to support the Army family program.

These resources are part of the total quality of life program within the Army. They are designed to reduce stress on military families, improve those programs that support our families, and further close the gap which exists between the benefits and services available in the society that we are pledged to defend and the limited benefits and services that our soldiers and families currently have available to them.

Funds to accelerate long required upgrade and construction of child develpment centers are included in the FY 87 budget request. Child care is a readiness issue. Army active duty members have a total of 511,600 children under the age of 12. In 1985, Congress approved six child development projects. In 1986, 19 projects are funded and another 19 projects are requested for 1987. In addition, funds have been requested to monitor and train people who offer child development services in their quarters.

QUALITY OF LIFE PROGRAM



QUALITY OF LIFE MAKE UP ($ MILLIONS)

	FY 86	FY 87
FAMILY PROGRAM	1496.8	1840.3
CONSTRUCTION	974.3	668.2
COMMUNITY (LESS CDC CONST)*	(20.4)	(35.3)
MEDICAL	(111.5)	(0)**
BARRACKS & DINING FACS	(409.6)	(332.9)
MAINT & PROD FACILITIES	(432.8)	(300.0)
REPAIR & MAINTENANCE	2816.0	3041.0
CHAPLAINS ACTIVITIES	19.8	20.9
DRUG & ALCOHOL REHAB	20.1	17.8
COMMUNITY & MORALE SUPPORT	243.6	289.2
OTHER PERSONNEL SUPPORT	7.0	6.1
UNACCOMPANIED PERSONNEL HOUSING OPS & FURNISHINGS	94.7	108.2
TOTAL	5672.3	5991.7

*CHILD DEVELOPMENT CENTER
**PROGRAM MOVED TO OSD CONTROL

Figure 3.1

New programs also address family initiatives in support of the Army Community Service (ACS) program, the primary resource for family support on Army installations. ACS has never been adequately funded to perform its missions and provide the services Army families deserve. While funding initiatives in FY 86 began to close the gap, our request for FY 87 would serve to improve markedly their ability to provide necessary services. A financial assistance and consumer education program will offer education and debt liquidation counseling to soldiers and their families. This program has taken on new significance in support of the Sure Pay initiative. ACS centers will also offer counseling and supportive services to handicapped family members, information and referral, follow-up and foster care. The funds requested in FY 87 would fully fund the program at all 166 ACS centers and provide for collection of information regarding world-wide medical and educational resources for use in the automated assignment process of soldiers. Other family programs include outreach for junior enlisted personnel for the Active Army, Army National Guard and Army Reserve, and for installation volunteer coordinators.

Military Retirement. The Army believes that the current retirement system has served us well. While there has been growth in costs in recent years, the largest portion (55 percent) has been due to inflation. The second largest portion (21 percent) is due to much needed increases in basic pay. The increase in the retiree population constitutes 19 percent of the increase and an additional five percent is due to adjustments to retired pay. The growth in the retiree population results from the post World War II decision to maintain a larger Active Army. The bulk of this growth has already occurred. The retirement system will not experience rapid future growth and serious personnel losses could occur from relatively small changes in continuation rates. Such losses of experienced personnel will hurt readiness and will jeopardize the volunteer basis for manning the Army. The current retirement system continues to support successfully the Army's manpower policies.

Army Medical Enhancement Program. The Army Medical Enhancement Program (AMEP) is a program to improve the availability and the quality of Army medical care.

During the 1970s, the Army Medical Department experienced critical shortages of physicians due to the termination of the Berry Program. Physician resources were used to sustain specialty care at medical centers until physician end strength could be rebuilt. The Health Professional Scholarship Program, implemented in 1972, has improved physician end strengths although some imbalance in the specialty mix remains. The AMEP will enhance primary care capability while maintaining specialty care programs at medical centers.

Each active duty Army family will be assigned to a primary care physician. The assignment of a primary care physician will create informal health maintenance organizations at each post so that families know which physicians are providing their medical care and who they should turn to if there are problems. The mix and number of physicians will be determined by the number and mix of the patient population.

Current general medical officer authorizations are being converted to board-certified family practice positions, and recruitment efforts have begun to speed implementation. Board certified physicians will provide a better trained physician, thus providing better care and reducing the number of medical referrals to other clinics.

Military Construction. The Military Construction, Army (MCA) program, which constitutes only 2.4 percent of the total budget request, is one of the principal means by which the Army pursues the goal of improving the living and working conditions of our soldiers and their families. Military construction funds finance the construction, rehabilitation or replacement of the facilities the soldiers need to live, train and maintain. Twenty-five percent of the FY 87 construction request will provide new or upgraded barracks for over 14,000 soldiers, along with dining, community and medical facilities. Over 35 percent of the request provides for improved operations and training facilities such as ranges, instructional facilities and security upgrades. More than 20 percent of the request provides for improved maintenance, supply and administration facilities. The remaining 16 percent of the request provides funds for research and development facilities, improved utility systems, land purchases, planning and design costs and minor constructions. The payback on this investment account in terms of recruitment, retention, readiness and efficiency far exceeds its actual cost. Our construction program reflects an obligation to our nation and our soldiers.

Family Housing. The availability of adequate, high quality family housing is an important factor in the quality of life enjoyed by soldiers with families. Prior to FY 84, family housing was severely underfunded as a result of fiscal constraints, unrealistic inflation rates, unexpected increases in fuel cost and, during FY 78 through FY 80, unfavorable fluctuation in foreign currency exchange rates. These factors and others combined to generate large backlogs in most areas of family housing. However, since FY 84 family housing has begun to emerge as an adequately funded program. The FY 87 request to establish a foreign currency fluctuation account is imperative to the viability of the family housing program overseas.

In response to Army initiatives, the Defense Family Housing Management Account was transferred back to the services for full management. Transfer of the account has resulted in the Army's ability to prioritize resources against its housing needs. It gives the Army an increased capability to balance its facilities accounts and fix its family housing deficits. The backlog of Deferred Maintenance and Repair (DMAR) was substantially reduced for the first time during FY 83.

In FY 85 the Army initiated a program for a stable annual investment to rehabilitate, renew, or replace those deteriorated or obsolete dwelling units currently in the Army inventory. The FY 86 budget continued the Army attack on large maintenance backlogs to improve the living conditions of our soldiers and their families. Build-to-lease and Rental Guarantee programs are innovative concepts which were first approved in FY 84 to provide additional housing at CONUS locations. Additional authorization was provided in FY 85 to accommodate stationing of new light infantry divisions and Congress extended the program through FY 86.

The Army Family Housing appropriation is shown in Figure 3.2. For FY 87 there is growth in all-areas of construction, leasing, operations and maintenance. The FY 87 budget reduces DMAR by $18 million; constructs mobile home facilities for 108 units; constructs 3,412 new housing units (CONUS-2,608; Europe-668; Other-136, includes 120 new attic units); eliminates or upgrades 1,359 substandard units into 1,124 adequate dwelling units; improves energy efficiency in over 11,887 units; and provides whole-house renewal for 2,520 units. Additionally, the budget requests authorization for 30,676 leases which support the needs of forward deployed soldiers, provide housing for Department of the Army civilians living in Germany and Korea, and support the Build-to-lease and Rental Guarantee programs.

The FY 87-91 Family Housing Program will:

- Eliminate the housing deficit;
- Reduce the deferred maintenance backlog to a manageable level by the end of FY 88;
- Eliminate or upgrade all substandard housing by the end of FY 89;
- Complete the energy conservation improvement program;

ARMY FAMILY HOUSING
($ IN MILLIONS)

	FY 85 ACTUAL	FY 86 APPROPRIATION	FY 87 REQUEST
NEW CONSTRUCTION	29	145	293
IMPROVEMENTS	100	102	146
PLANNING & DESIGN	14	15	24
OPERATION & MAINTENANCE	1,078	1,053	1,106
LEASING	105	114	163
DEBT PAYMENT	2	1	1
	1,328	1,430	1,733

Figure 3.2

Commissaries. The mission of the Army commissary is to provide resale items to authorized patrons at the lowest practicable price in a facility designed and operated similar to standards used in commercial supermarkets. Army commissaries provide an essential non-cash benefit which is considered as an entitlement for soldiers recruited under the present voluntary recruitment program. Commissaries play a key role in maintaining morale and ensuring a high quality of life for the Army family.

The commissary construction program provides for replacement or modernization of commissaries from surcharge funds paid by commissary patrons. In 1986 and 1987 the Army plans to spend $124.8 million in surcharge funds on replacements and major renovations of 19 commissaries world-wide.

Dining Facility Modernization and Construction. Dining facilities are an important part of the Army effort to improve the quality of life for the soldier. Good dining facilities have a positive impact on soldier morale and contribute to unit cohesion and soldier retention. The Dining Facility Modernization/Construction Program is a Department of the Army initiative to upgrade 221 troop dining facilities to DOD standard by providing modern food service equipment, serving lines to support regular and short order menus, and a contemporary dining environment. This program includes plans to construct new facilities that can provide quality of life benefits which may not be possible, even with extensive modernization, or because existing facilities have deteriorated beyond repair. New facilities will also be constructed to support force structure changes and unit activations. The funding profile provides a sound program which will eliminate the modernization backlog by 1995.

Army Equal Opportunity Program. The Army has long recognized that an essential ingredient of force readiness is human resource readiness. A critical factor in maintaining a high level of human resources readiness is ensuring that all soldiers have an equal opportunity to excel, based solely on merit, fitness, capability, and potential. Army leaders and commanders at all levels have taken positive actions to continue to embed firmly the equal opportunity function within the Army's leadership framework.

Minority and female representation in the Officer Corps is the highest it has ever been, and soldier opinion surveys indicate that the positive attitude toward equal opportunity continues to increase. Equally significant, incidents of sexual harassment continue to decline, and Army-wide trends show that this unacceptable behavior has become a less serious problem.

Alcohol and Drug Abuse. Alcohol and drug abuse in the Army has been on a steady decline since 1982. Progress in this area is attributable to command involvement, more sophisticated detection methods, and policies which reinforce the Army's intolerance of substance abuse. A forensically credible drug testing system and more stringent personnel policies are effectively deterring drug abuse. Deglamorizing alcohol and an effective drunk driving enforcement program are two initiatives designed to reduce the adverse effects of alcohol abuse. For soldiers with substance abuse problems who have potential for future service, the Army offers an effective rehabilitation program.

Admitted use of marijuana, the most popular illegal drug, by first term soldiers is at the lowest level in 11 years. Surveys indicate that consumption of alcohol is decreasing. Since FY 82 the alcohol and drug abuse rehabilitation program has consistently returned to duty over 70 percent of the soldiers they have treated.

Discipline of the Force. Since FY 74 all four major crime categories (violent crime, crimes involving property, Absent Without Leave (AWOL) and desertion), displayed a steadily declining statistical trend. Credit for this decrease in indiscipline can be attributed to many factors. Chief among them are the accession of highly motivated, quality soldiers; a concern with discipline shared by commanders at all levels of Army leadership; and a vigorous Army crime prevention program. A comparison of FY 85 indiscipline rates per 1,000 with FY 84 rates shows the decline continuing in violent crime, property crime and AWOL. The desertion rate per 1,000 has increased 8.2 percent, but probably reflects a statistical aberration rather than an upward trend.

Given the continued accession of high quality personnel and the maintenance of a healthy command climate that supports discipline, these generally favorable trends should continue.

INDICATORS OF DISCIPLINE IN THE ARMY

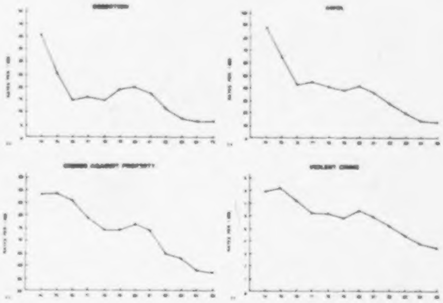


Figure 3.3

Army Safety Program. The Army Safety Program is dedicated to the preservation of resources. Annual goals of the program are to reduce loss of manpower and materiel from accidents and provide a safe and healthful environment for all Army personnel.

During FY 85, the Army reduced the number of Army motor vehicle accidents, but experienced a slight increase in privately owned vehicle (POV) accidents. Ongoing countermeasures targeted at reducing major causes of POV injuries center around the mandated use of automobile restraint systems and drug/alcohol driving education programs. The success of these measures can be measured in the decline in fatalities experienced during FY 85.

A shortfall in FY 85 was the Army's failure to achieve the Presidential and Secretary of Defense goal of a 3-percent reduction in civilian injuries. Plans, initiated by the Chief of Staff in

SafeArmy 1990, have been implemented to achieve the overall Presidential 5-year goal for both military and civilian injuries.

Reserve Component Initiatives. There are several RC-unique initiatives and challenges facing the Army during FY 87. These include the issues of 40 and over cardiovascular screening for reservists; preparing and maintaining dental records for reservists; and the issue of paying reservists while they are attending U.S. Army Reserve schools.

All soldiers age 40 and over are required to undergo cardiovascular screening before taking part in the Army Physical Fitness Program. This program was implemented in the AC in 1981 and is now in a test stage in the RC. The program provides an indicator of cardiovascular condition, which is an element of the overall physical fitness of Army reservists. The ultimate objective is that in the event of mobilization, the entire RC will be physically ready and capable of performing its mission.

Dental records are a vital link in the identification of human remains. The Army leadership has expressed concern that many reservists either lack dental records or have incomplete dental records. A comprehensive program has been designed to correct this problem. The highest priority will be given to obtaining and protecting identification panographic x-rays and to ensuring that records of RC soldiers who train outside of the United States are complete and accurate.

U.S. Army Reserve schools play a vital role in the training of RC soldiers. The schools offer the Command and General Staff College Course, warrant officer entry courses, enlisted job related courses, NCO leadership courses and other courses supporting the NCOES. To increase enrollment in these courses by USAR soldiers, a test is being conducted to determine if it is feasible or desirable to pay these soldiers while attending USAR school courses.

Antiterrorism. Terrorism directed against the U.S. Government has continued to increase in both number of actions and the severity of those acts. In response, the Army is executing its responsibility to provide protection to soldiers, their families, and civilian employees through a force protection program which includes the areas of training, physical security, intelligence, and personal protective measures.

Intelligence resources to support the program remain insufficient. However, security enhancements at the most critical installations have been initiated to meet the threat. The current concept is to use state-of-the art technology to supplement manpower, e.g. automatic barriers, detection systems and robots. In consonance with these improvements, continued congressional support and funding are necessary to provide the required physical security improvements, continue to develop the antiterrorist capabilities of both installations and units, and develop an antiterrorism information system.

Domestic Assistance. The Army actively provides assistance to the U.S. public in peacetime to include support for natural disasters, civil law enforcement, shelter for the nation's homeless, and significant international athletic events in the United States.

In support of the DOD policy of maximum assistance to the nation's war on drugs, the Army has augmented the Office of the Vice President's National Narcotics Border Interdiction System regional centers with permanently assigned personnel. They coordinate the legal involvement of Army personnel and logistics assets in indirect support to civil law enforcement drug interdiction initiatives. Extensive support to drug enforcement operations has included employment of Army mobile radar units, helicopters, communications, and night vision and surveillance equipment. The Army has loaned 23 aircraft to the U.S. Customs Service and the Border Patrol. In FY 86, the Army will also loan two Black Hawks and six C-12C airplanes to the U.S. Customs Service, as directed by Congress, and five observation helicopters to the Border Patrol. In addition, the ARNG provides a significant amount of support to the domestic marijuana eradication program through the use of aircraft, vehicles and personnel working with federal, state and local law enforcement agencies. This support is conducted in conjunction with scheduled training exercises and in a State active duty status. Loans of equipment and support to drug interdiction missions will continue as long as national security and military preparedness are not adversely affected.

Army support to the Shelter for the Homeless Program continues. Four shelters are currently operating with Army assistance. The Army committed $811 thousand in FY 85 for new projects at Fort Meade, Maryland and Seattle, Washington.

The Secretary of Defense approved the use of Fort Benjamin Harrison, Indiana as an athlete village for the 1987 Pan American Games in which approximately 5,200 athletes will participate. For FY 86, $10 million has been appropriated for this support, and another $25 million is expected for FY 87.

PRODUCTIVITY ENHANCEMENT

With the constrained active end strength and civilian force, the Army is increasingly examining methods of improving the productivity of the force through the use of technology. With the recognized need to deploy rapidly light forces, special efforts are being made to improve the tooth-to-tail ratio, the relationship between combat and support soldiers.

The Army has successfully applied productivity and efficiency tools in many activities. Efforts are being intensified in other areas and at all organizational levels to ensure maximum productivity increases.

Personnel Service Support. The Army has significantly reduced the personnel and administration support structure of the Army's corps and divisions. To accommodate these cuts, a functional redesign of the personnel and administration (P&A) system was necessary.

A task force conducted a bottom-up scrub of every task and procedure accomplished in the P&A organizations of the Army. The scrub generated more than 500 work reducing ideas, many of which have already been executed. While it is too early to assess fully the long-term manpower payoff, the potential exists for significant work productivity.

The work done thus far by the personnel community has significantly improved personnel support operations and is very necessary as the Army continues to modernize.

Transportation Operational Personal Property Standard System. The Transportation Operational Personal Property Standard System (TOPS) is a joint service non-major management information system designed to automate administrative functions at Army personal property shipping offices. TOPS standardizes, through automated processes, the DOD Personal Property Moving and Storage Program.

The General Accounting Office identified personal property as an area needing improvements. In addition to productivity benefits through standardization, additional benefits resulting from improving quality control of commercial movers, reducing claims for loss and damage, reducing the incidents of "poor" moves which impact adversely the soldier through out-of-pocket expense, and significantly reducing incidents of late arriving documentation which severely impairs the early analysis of unsatisfactory transportation carriers' service.

Logistics Applications of Marking and Reading Symbols/Microcircuit Technology in Logistics Applications. Logistics Applications of Marking and Reading Symbols (LOGMARS) represents the introduction of bar code technology into the DOD Logistics System. Microcircuit Technology in Logistics Applications embraces a wide range of automatic identification devices and methods of storing and transporting bulk data that does not lend itself to bar codes. Initial application prototypes are expected to be tested during FY 86. Objectives of these programs include greater accuracy, improved production flow, increased asset visibility, reduction of documentation requirements, order and ship time and stockage investment levels. Cost avoidance is projected to be approximately two dollars for each dollar invested.

Combat Field Feeding System. The Combat Field Feeding System was implemented to maintain high standards for feeding soldiers in the field while allowing a reduction in numbers of cooks to support increased combat strength in units. Hot field meals will be primarily from the new tray pack. The tray pack is a sealed tray-shaped can containing an entree, starch, vegetable or dessert which is heated by submersion in boiling water. Initial Active Army cook spaces realigned under this system are about 3,500. The reduced authorization for cooks requires the conversion of some garrison dining facilities to contract operations and supplementing military cooks with direct-hire civilian cooks.

Supply and Maintenance Assessment Review Team. The primary purpose of the Supply and Maintenance Assessment Review Team (SMART) is to improve the Army's logistics support by eliminating administrative burdens, streamlining current systems, taking advantage of technology, and implementing good ideas or suggestions in an expeditious manner. Project SMART, a key "soldier-helping" program, has saved hundreds of man-years and millions of dollars over the last three years. For example, the 1,185 ideas received during FY 84 exceeded the total number of ideas received during FY 82 and FY 83 combined. Over 2,000 ideas were received during FY 85.

ACQUISITION

Defense Acquisition Improvement Program. To improve the way DOD acquires its materiel over 30 areas for action have been identified. Through consolidation and closure of issues, these actions were reduced to six. A seventh issue, strengthening the industrial base, was added during FY 84. These Defense Acquisition Improvement Program issues and some recent achievements are:

Program stability - Production quantity floors were maintained for selected programs. Program stability is expected to be enhanced greatly for FY 86 and beyond by the new program management control system. The restructured program management control system provides intensive management for major programs, including high level agreement on program baselines, a more disciplined change process, increased visibility of program trends, improved program stability, and greater control over costs. The bottom line objective is program stability, leading to a fundamental improvement in the Army's ability to reduce costs.

Multiyear procurement - Five additional programs were approved during FY 85 and six were approved for FY 86. The Army is requesting two new starts for FY 87.

Economic production rates - The Army continually uses economic production rate information to evaluate production purchases at the lowest possible cost. Currently 17 major systems are evaluated against these criterion.

Realistic budgeting - A broader implementation of Total Risk Assessing Cost Estimate-Production increased the efficient use of the FY 85 budget. Further improvements are planned for FY 86. Present projects focus on data base development, cost estimating relationships, and cost factors.

Improved readiness and support - General officer and SES review of working group initiatives at quarterly reviews resulted in improved readiness of equipment.

Encouraging competition - Regulation requires establishment of competition, where possible, by Decision Milestone III. All future acquisition plans must address competition.

Strengthing the industrial base - A milestone schedule and plan of action to improve industrial base preparedness planning has been developed. Ongoing efforts include the creation of an automated data base for analysis of industrial base issues.

The Army is instituting initiatives to reduce costs and develop a comprehensive, up-to-date cost estimating data base as a prerequisite to the development of independent cost estimates and the performance of cost research.

Multiyear Procurement. In considering candidates for multiyear contracts the Army uses the basic criteria established in the FY 82 Authorization Act: (1) Benefit to Government, (2) Stability of Requirement, (3) Stability of Funding, (4) Stability of Configuration, (5) Degree of Cost Confidence, and (6) Degree of Confidence in Contractor Capability.

The current challenge facing the Army is one of maintaining stability of funding for multiyear candidates while at the same time maintaining the management flexibility required to deal effectively with downward adjustments to total obligation authority.

The success of a selective multiyear approach is reflected in the estimated cost avoidance for FY 85 and FY 86 of $401 million and $755 million respectively.

Reducing Operational Support Costs in Research, Development & Acquisition Process. Taking steps to reduce Operation and Support (O&S) costs in the RDA process is a key initiative that is receiving renewed emphasis in the Army. The emphasis is on reducing weapon or system O&S costs by addressing early in the RDA process engineering concepts, procedures, techniques and technological approaches to improve logistics support and supportability. Appropriate funding support for this initiative is identified and allocated as an integral part of the program funding profile. Additionally, the Army is initiating a dedicated program effort in FY 87 for logistics R&D (battlefield sustainment), which focuses on identifying logistics deficiencies, developing solutions to the deficiencies and having each solution systematically addressed, and incorporated in the RDA program.

Competition Advocate Program. The Army's Competition Advocate Program was started officially on 1 April 1985. The Army policy on new starts is to compete to the maximum extent practicable. Spare parts are to be broken out and purchased directly from prime contractors when possible.

To achieve success in promoting full and open competition the Army appointed 240 competition advocates. They will assist the approximately 9,000 people involved in the acquisition process. Each competition advocate has the same charge: press for competition in the procurement process. These competition advocates have helped the Army exceed its FY 85 goal to have 46 percent of the total dollars awarded competitively. The Army awarded 46.9 percent of all procurement dollars, a total of $14.9 billion, competitively. This was an increase of $3.9 billion over FY 84. Additionally, 61.7 percent of all contract actions were awarded competitively, a four percent increase. Examples of successes are:

·Tank Automotive Command (TACOM), a major subordinate command of Army Materiel Command (AMC), avoided a $511 thousand expenditure on a recent contract by developing a second source for fire extinguishers used in the Fire Suppression System of the Bradley Fighting Vehicle. TACOM worked with the vehicle contractor to develop a second source for extinguishers on the production contract, cutting the cost of extinguishers by 39.5 percent.

· Dramatic improvements have been realized from Army's Spare Parts Review Initiatives Program and AMC Spare Parts Task Group. Approximately $250 million in cost avoidance was realized during FY 85.

·The Missile Command selected the Hellfire launcher for breakout from the sole source contractor. A second source made a successful bid which reduced the unit price 67 percent and resulted in a price reduction of $10,821,339.

Contract Fraud and Irregularities. During 1985, the Army has substantially increased its efforts in combating contract frauds and irregularities. Sixty-six contractors were suspended and 116 were debarred from doing business with the government. This was a 75 percent increase over calendar year 1984 and a 168 percent increase over 1983. Since 1 January 1985, over $3 million has been collected from contractors who had defrauded the government. In comparison, 1984 recoveries were less than $250 thousand. Factors which contributed to this substantial increase are:

- The system used to remedy contractual irregularities and frauds, put into operation in 1983, is beginning to mature;
- Early contact with investigators, auditors and contracting officers;
- The number of cases reported to the Army is increasing.

EFFICIENCY IN RESOURCE MANAGEMENT

The Army has successfully applied productivity, efficiency, and management improvement tools in many activities. Constrained resources clearly demonstrate that improved capability must be generated through productivity gains. Increased productivity is an area of intense effort by all levels of Army leadership. The Army's productivity plan builds on the already successful productivity and efficiency initiatives at installations, such as, Productivity Capital Investment Programs, Value

Engineering, Organizational Efficiency Reviews, Model Installation Program ideas, and Standard Installation Organization concepts. Results expected from these efforts and workforce motivation programs such as Quality Circles and Productivity Gain Sharing are a more positive environment to meet the resource challenge to produce a better Army. Through active involvement of soldiers and civilians at every level, Army leaders will have opportunities to obtain modern equipment and facilities; to apply productivity gains in certain areas toward other priority initiatives; and to achieve an efficient and cost effective organization. All these achievements will assist the Army in meeting the President's goal to increase productivity by 20 percent over the next seven years.

The Model Installation Program. The Model Installation Program (MIP) continues to produce very positive results for the Army. During FY 85, this initiative eliminated obsolete procedures and encouraged smart new ideas at designated "test beds." The program has been expanded from six installations to ten and those installations have generated over 2,900 suggested ways of improving how the Army does business. These suggestions have ranged from the elimination of reports to the use of the state-of-the-art laser printers. The concepts of decentralizing and decontrolling have been expanded into a number of other areas to include engineering activities, logistic functions and RC activities.

A number of MIP suggestions have already triggered changes to Army regulations or procedures that will make better use of limited resources. Examples include the submission of a natural resources report "as required" rather than annually and allowing drivers of commercial-type vehicles to use a valid state drivers license instead of requiring a separate military license.

Standard Installation Organization. The Army has made great strides in focusing on improving overall installation management. During FY 86, the Army will institutionalize the standard installation structure with standard core functions. The Army expects to gain many benefits from this management initiative, such as:

- Facilitating the transition from peace to war by ensuring adequate support to the RC units that will replace deploying active units during mobilization.
- Linking organizational and functional requirements to the Planning, Programming, Budget and Execution process. Through this linkage, the Army can develop acceptable performance factors and results for each core function and measure resources applied and results achieved.
- Providing consistent and predictable support to the members of the Army family.
- Providing the development of standard management and information systems for use at all Army installations.
- Providing the basis to increase the efficiency and effectiveness of installation base operations.
- Assisting the Army in developing a cadre of professional managers to operate Army installations.

Base Closures. In response to increased interest in achieving savings and efficiencies through base closures and realignments, the Army has undertaken several actions to study its overall base structure and real property holdings. The purpose of these analyses is to determine where consolidations and/or closures of Army installations can be undertaken that will allow a more effective use of the Army's resources with no detrimental impact upon the Army's ability to perform its missions. Within the past year, the Army has announced major realignment actions that will consolidate all engineer training at Fort Leonard Wood, Missouri; the Intelligence and Security Command Headquarters at Fort Belvoir, Virginia; and will allow the Army to move several headquarters out of expensive leased quarters to Army installations. The Army has also reviewed several pieces of proposed legislation that would expedite procedures for base closure and realignment action. All pending bills have been supported and, if passed, will result in a greater ability on the part of the Army to achieve productivity gains and efficiencies in developing its overall force structure.

Organizational Efficiency Review Programs. During FY 85, efficiency reviews conducted for both contractible and noncontractible functions expanded in all major commands. Forty studies of commercial (contractible) activities involving over 2,550 spaces conducted in 1985 resulted in realignment of over 1,000 civilians and 605 military spaces. Studies of noncontractible functions generated an additional 431 spaces for application to high priority work. The recent merger of these two programs will increase coordination and allow commanders to reallocate organizational review personnel between programs to achieve efficiency review study objectives. Additional emphasis has been placed on completion of ongoing studies of contractible functions prior to the end of FY 87. This effort will contribute to the overall improvement of Army management objectives by concentrating efforts on the most productive areas. In addition, the efficiency with which the Army executes the programs will be increased by reducing duplication and by sharing products.

Productivity Capital Investment Programs. Army commanders are aggressively pursuing these programs to improve their resource use. The programs provide seed money for fast payback tools, equipment and facilities that save manpower, reduce costs, increase productivity and improve readiness. Results are better managed and supported organizations with soldiers trained with state-of-the-art equipment, leading to a more ready force. Examples of equipment are training weaponeer simulators which enhance marksmanship feedback and also save live ammunition; asphalt reclaimers that repair roads destroyed by heavy equipment during training exercises; airport surveillance equipment, tactical vehicle washracks; and other labor saving equipment which enables soldiers to perform their combat mission better. The programs historically have a return on investment of $17 to every $1 invested.

Value Engineering. The Army's Value Engineering (VE) program is designed to lower the cost of functions while achieving equivalent or better performance and reliability. Examples of in-house VE are a proposal at a depot which results in cost avoidance of $6 million on the CH-47 overhaul and a VE study of a firing range which resulted in $9 million in cost avoided. Army contracts contain the VE Incentive Clause which encourages contractors to submit resource conserving VE Change Proposals. Contractors can share up to 50 percent of the net reduction in contract costs resulting from Army accepted proposals. For example, the proposal submitted and accepted on the M577 and M582 fuze contract resulted in a $16.4 million reduction in cost of the contract. VE produces an average return on investment of $15 for each $1 invested.

Army Energy Program. Executive Order 12003, June 1977, required all federal agencies to reduce gasoline consumption by 15 percent and energy consumption 20 percent per square foot of active floor space by FY 85 compared to the FY 75 level of consumption. The Army has operated an extensive energy conservation program with the overall objective of conserving energy without degradation to readiness, training, or quality of life for soldiers or their families.

Based on FY 75, Army energy consumption for FY 85 was reduced by nearly 23 percent per square foot and gasoline consumption was reduced by nearly 25 percent. Cost avoidance for FY 85 was $600 million.

Total cost avoidance since FY 75 is over $3 billion. The Army will continue the Energy Conservation Investment Program, construct more energy efficient buildings and emphasize energy consumption when developing new equipment. Cost avoidance for FY 87 compared to FY 85 should be $100 million.

Non Tactical Vehicle Program. The non tactical vehicle (NTV) fleet consists of 71,574 commercial vehicles required to support training, security, medical, sanitation, facilities maintenance, and other essential functions at Army installations world-wide. About 30 percent of the current fleet is replacement eligible (overage/overmileage/short). Due to recent funding reductions, the NTV fleet will have a replacement backlog of 34 percent by

FY 91. Shortfalls in the program increase operating and maintenance costs, leasing requirements, fuel consumption, and use of tactical vehicles in administrative roles.

Condition of Real Property. The average age of the Army's physical plant is 35 years. As facilities age, major components wear out and require extensive repair or replacement. Since these requirements occur at different intervals, the funding needs for a facility which is 20 or 30 years old are considerably different from one that is 5 to 10 years old. Compounding this is the fact that the Army's physical plant becomes more complex with force modernization and changes in living and working standards. The Army recognizes that resource levels must be raised to reverse the deterioration of the physical plant. The decline in maintenance backlog, down to $1.148 billion by the end of FY 85, is an indication that the condition of real property is improving.

The FY 87 budget will hold facilities deterioration in check. Extensive renovation will continue to drive costs higher as components wear out due to age and usage, and related resource requirements will remain high for the balance of the eighties. The requested funding level must be fully supported to maintain facilities at standards that provide proper living and working conditions.

Installation Restoration Program. The need to address contamination problems associated with past activities, such as industrial manufacturing, weapon system production, and waste disposal was recognized in 1975 and the Installation Restoration Program (IRP) was established to identify, assess and clean up contamination on Army properties. The IRP is the Army program to comply with remedial response requirements of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (Superfund) and Executive Order 12316, Responses to Environmental Damage.

Since 1975, the Army has assessed 181 of its installations for potential contamination problems. It is estimated that remedial actions will be necessary at 50 installations. Five installations have already been completed and the cleanup efforts are ongoing at an additional four installations. The majority of problems involve soil and groundwater contamination by explosive compounds, solvents, and heavy metals. Cleanups are expensive and typically involve landfill closure, removal or treatment of contaminated waste materials, and groundwater restoration. In some cases contamination has migrated off post and has affected civilian water supplies. The U.S. Environmental Protection Agency has included 23 Army sites on the National Priorities List of hazardous waste sites.

Given current technologies, the estimated cleanup cost for the Army is $1.5 billion. The level of funding must be fully supported to protect the health and safety of troops and nearby civilian communities and to allow mission activities to continue uninterrupted.

Fort Drum Construction Financing. The Army has proposed an innovative method for funding the construction of facilities at Fort Drum for the 10th Mountain Division (Light Infantry). Salient features of this method include:

- Congressional approval to authorize the total project in FY 86 and advance appropriations for FY 87, 88, and 89 so that funds appropriated precede obligations incurred.
- Advance appropriations that become available in the fiscal year for which they have been identified and appropriated, thereby eliminating the requirement for full scoring in FY 86.
- Advance Military Construction, Army (MCA) appropriations requested are:

  FY 87: $232 million

  FY 88: $221 million

  FY 89: $162 million
- Large construction contracts to maximize economies of scale, achieve faster completion, and other management efficiencies. This should ultimately result in cost savings to the government.

INFORMATION MANAGEMENT

The information management goal is to design, build, and field command and control and support systems so the Army can operate the same in war as in peace. The focus of this effort is the need to integrate the five major disciplines of information communications, automation (to include office automation), audiovisual, records management, and publications. This will assure resources are focused to improve readiness.

The highest priority in information management is to assure integration and interoperability in information systems and between the theater and tactical, strategic, and sustaining base arenas.

At the theater and tactical level, information management is being rapidly modernized with nearly one-half of the information resources being devoted to the Army in the field. The connection of combat radio nets, data distribution, and area communications networks support the synchronization of maneuver, fire support, air defense, intelligence, and combat service support units. The fielding of key systems such as SINCGARS, ADDS, MCS, and MSE before the end of the decade will greatly enhance execution of AirLand Battle doctrine. Taking advantage of technological advances such as fiber optics, the Army will improve strategic communications. Satellite communications terminals for use on MILSTAR and DSCS are being procured to provide for today's changing environment.

The historically artificial distinctions among the information disciplines, and the tactical, strategic, and sustaining base arenas have been broken, and represent an ambitious and highly successful first step toward ensuring the reality of the "White House to foxhole" connection.

Communication Technology. The Army has explored the potential military use of electronic media and systems for computer based instruction, tele-training and conferencing. Field evaluations show positive results for effective information transfer and cost avoidance.

The interactive computer controlled videodisc system is scheduled for initial procurement in FY 86 for use in Army schools. This will be followed by selected distribution to units in the field starting in FY 87.

Army Corporate Database. The Army Corporate Database is a physically distributed data system which will provide the Army's comprehensive data needs in both a secure and unclassified environment. The data is an information resource to answer questions that cross functional lines and levels of command.

The effort to standardize data elements and identify one proponent for each has been revamped and accelerated to support this effort. We are continuing to develop a data encyclopedia of the standardized data elements which identifies proponent, users, and stored locations of data elements as well as their definition.

This effort will permit decision makers and action officers to do their work from an organizationally integrated perspective. Failure to fund this initiative will result in the continuing development and use of systems which only support a small community of functional users. This results in decisions based on different data and in more expense, inefficiency, and less effective decisions.

Army Supercomputer Initiative. The Army is experiencing a major shortfall in advanced computing capability to support weapons system design, modeling, and simulation requirements. With advanced technology provided by supercomputers, significant improvements can be made in developing weapons to defeat new Soviet armor, improve armaments, air defense, conventional munitions, battlefield nuclear weapons, and provide a realistic chemical defense.

The proposed solution to the requirement is to acquire supercomputers competitively. The first supercomputer configuration will serve a variety of Army users from the Ballistic

Research Laboratory, Aberdeen Proving Ground, Maryland. To satisfy priority near term requirements, an interim capability is being provided with a less capable but immediately available machine. This machine will be provided in September 1986. This contract will have an option for a second configuration. Additional configurations are programmed at the rate of one each year through the out years until Army requirements are satisfied. The estimated cost of the program is approximately $200 million through FY 91.

FORCE INTEGRATION

Army efforts to assure the effective and efficient use of resources to produce ready forces include a variety of initiatives to ensure force integration occurs smoothly. By monitoring current unit status, forecasting future readiness based on projected organizational changes and equipment distribution and merging these forecasts with a recently developed technique called Measuring Improved Capabilities of Army Forces, it is possible to predict unit capability.

Another technique integrates funding requirements for organizations with their projected status over time. To assist integration of these actions, a system of Army policies, people, computer programs, data bases, and communications will serve Army decision makers at all levels. Its central purpose is to provide decision makers current and accurate information.

In combination, these techniques are central to effective use of Army resources in the fielding and maintenance of complete, combat ready systems and organizations.

Army Modernization Training. Army Modernization Training (AMT) in FY 87 will be unprecedented in complexity and scope. The AMT program is the linchpin for the successful integration of new doctrine, organizations, and equipment in both the AC and RC. Embracing the approach to field first those units that are first to fight, synchronization of support is now the focus for AMT efforts.

The FY 87 budget adequately funds training programs for new equipment and assures the sustainment of training readiness. Program stretch-outs resulting in extended fielding will continue to present unique training challenges, particularly for the RC.

Manpower and Personnel Integration. Over the past 15 years the Army has introduced more than 400 new weapons and equipment into the inventory. Using new technologies, we have produced systems that are superbly capable. However, more needs to be done to employ technology better to improve soldier performance. We now have a solid plan to make this happen called Manpower and Personnel Integration (MANPRINT).

MANPRINT is the comprehensive technical effort to integrate the full range of human factors engineering, manpower, personnel, training, health hazard assessment, and system safety. MANPRINT is designed to ensure optimum system capability by enhancing soldier performance and reliability during material design, development, and production. While MANPRINT is concerned with the entire materiel acquisition process, its primary focus is on front end analysis to develop a clearer understanding of the potential manpower, personnel and training impacts of a proposed materiel system. Through this process, decision makers are provided information for evaluating a variety of trade-offs concerning factors such as number and quality of people, force structure, training time, technology and cost.

THE ARMY OF TOMORROW: PREPARING FOR THE TWENTY-FIRST CENTURY

The Army is committed to planning deliberately for the future and making informed decisions today to ensure that the capabilities of tomorrow's force are appropriate for executing assigned missions. To ensure that programs during the remainder of this century and in the early 21st century support consistently the fielding of necessary warfighting capabilities, the Army has developed and is using an integrated planning process with top-down guidance approved by the Army leadership.

This guidance provides consistent direction for actions necessary to meet the Army global requirements during the remainder of this century and into the 21st century. The guidance includes a logical framework for focusing Army developments, to include doctrine. The framework is derived from consideration of threats to national security, national military strategy, the requirements of the Unified and Specified Commands, and the Army's AirLand Battle doctrine.

The basic warfighting principles of AirLand Battle are not expected to experience significant change. The Army plans to continue using this doctrine during the remainder of this century and into the 21st century. Methods, procedures and techniques will be modified to keep pace with the changing threat, techniques and capabilities.

The Army has also published the first edition of Army 21 as an interim operational concept that focuses on the first 25 years of the 21st century. When review is completed, it will be used to examine how best to conceptualize combat operations in the future and develop future joint concepts with other services. Army 21 will also be available to Army laboratories and industry to focus efforts on developing technology for the future.

The essential framework for moving the Army from the present into the 21st century is described in the following vectors, critical tasks, and key operational capabilities.

VECTORS

The Army's planning process is guided by vectors which define paths that provide direction, continuity, and focus for the Army's deliberate progress from the present to the future and from planning to execution. These vectors are:

Provide quality soldiers in the Active and Reserve Components.

Fight and sustain as part of joint and combined forces.

Field a flexible, sustainable, modernized force to fight across the conflict spectrum.

Exploit operational and tactical dimensions of AirLand Battle doctrine.

Develop and exploit high technology and productivity enhancements.

Improve tactical and strategic deployability.

CRITICAL TASKS

As the Army moves along these vectors into the 21st century, it will need to perform numerous tasks. Listed below are critical tasks the Army must accomplish to enhance its warfighting capabilities and ensure its success in combat. The military application of the high technology and industrial advantages available to the United States and the melding of these advantages with the operational concepts of AirLand Battle offer the greatest potential for accomplishing these critical tasks.

The critical tasks are:

Enhance the performance of individual soldiers and battlefield leaders.

Enhance joint and combined operational capabilities.

Enhance the productivity of units.

Achieve synchronization of the battlefield.

Field a deep attack capability.

Field a capability to defeat advanced Soviet armor.

Achieve modernized battlefield sustainment capability.

KEY OPERATIONAL CAPABILITIES

It is essential that the Army focus on critical warfighting capabilities. These critical or "Key Operational Capabilities" address primarily the needs derived from the vector, "Exploit the operational and tactical dimensions of AirLand Battle doctrine." However, they support aspects of other vectors as well. The Key Operational Capabilities are constructed with objectives within each capability and tasks necessary to achieve these objectives. Achievement of these objectives and tasks in each Key Operational Capability will enable the Army to execute the defined critical tasks.

Soldier and Unit Performance Enhancement. Soldier and Unit Performance Enhancement (SUPE) objectives are to maximize soldier combat capability, improve soldier combat survivability, develop battlefield leaders and increase unit effectiveness.

Ongoing R&D programs supporting these objectives and showing high potential for achieving a leap-ahead in individual soldier performance or in unit effectiveness were selected for inclusion in the definition of SUPE. The programs were drawn from the medical and human performance work areas and include specific efforts in all four objective areas. Most elements of the program are in the early stages of research and development and all are making satisfactory progress. Five priority programs have been identified. These include research into NBC prophylaxis, leader development and selection, fatigue reversal, a training structure for large scale simulation network (SIMNET) and an integrated electronic decision support system for armored vehicles.

Reconnaissance, Surveillance, and Target Acquisition. Reconnaissance, Surveillance and Target Acquisition (RSTA) identified systems, programs and developmental challenges provide a statement of those most critical intelligence, electronic warfare (IEW), and target acquisition tasks necessary to execute the AirLand Battle doctrine. The RSTA objectives are to field an advanced order of battlefield intelligence in support of the AirLand Battle; develop enhanced munitions-vectoring capability for AirLand Battle weapons; and improve the combat effectiveness of soldiers and units engaged in IEW operations on the battlefield. These objectives will be achieved by providing adverse weather, day/night reconnaissance systems; advanced sensors capable of target detection, identification, classification, and accurate location for attack with brilliant munitions; advanced computer based techniques for automatic collection analysis; and dissemination of RSTA information. RSTA contributes to the critical task, "field deep attack capability", by producing deep reconnaissance, surveillance and target acquisition. New systems supporting the RSTA program will allow commanders to see the deep operations area without increased peril to their troops.

Command Control and Communications. The objectives for command, control and communications (C3) are threefold: to facilitate the commander's decision making process to effect a favorable battle outcome, to upgrade the continuity of C3 functions and to improve the effectiveness of all personnel involved in C3 functions.

The commander's decision making process can best be enhanced by providing highly reliable and accurate information. This will enable the commander to synchronize combat power and attack deep in an enemy's rear area as well as providing for successful counterattacks. To accomplish this synchronization, C3 will serve as a focus to develop and field a common user information management system that integrates voice, data, and image while allowing evolutionary change. This network will be secure, self-organizing, electromagnetic pulse and anti-jam protected. It will use common protocols and standards for joint, combined, and sustaining base interoperability. To assist commanders to visualize the battlefield better, know the status of weapons and support systems, and anticipate enemy intentions, the Army will develop and field an integrated battle information management system with real-time display and decision support systems.

The continuity of C3 functions will be improved by giving the commander access to long-range robust communications capability and to autonomous, as well as distributed, data bases. These data bases will allow operations with degraded communications, reconstitution, and alternate processing. Also, these information management systems will be designed with reduced electronic, visual, noise, and infrared signatures.

C3 can significantly increase the effectiveness of personnel involved in C3 functions by integrating battlefield information management systems in a vehicle with mobility equal to or greater than the maneuver element supported. These integrated information management systems will include power, antenna, and NBC protection. To minimize peace to war transition, tactical information management systems will be used in garrison as well as on the battlefield. These systems will use artificial intelligence techniques for training, troubleshooting, and fault isolation, as well as radio frequency, and general C3 planning.

Battlefield Lethality. Battlefield lethality identifies the need to develop and field advanced lethal mechanisms necessary to optimize execution of AirLand Battle doctrine. This process encompasses improved munition effectiveness, increased range and accuracy, adverse weather, day or night, obscurant-penetrating capabilities, alternative tank attack techniques, force survivability and advanced countermeasures. Priority of attention will be given to achieving the critical task of ensuring that we can defeat future advances in armored vehicles and enhancing our deep attack means. The exploitation of advanced technology, especially micro-chip circuitry, is the foundation of lethality improvements. Chemical, directed, and kinetic energy weapons are also being pursued.

Battlefield Sustainment. To provide sustainment to the Army of the future, four major objectives provide the basis for long range planning. First, prepositioned war reserve stocks must be balanced to meet the Defense Guidance. By using advanced simulation, accurate requirements for critical items will be determined. Selected critical items for modernized systems will be procured. Second, critical industrial base resources must be protected. The Army must identify shortfalls in the industrial base to support the AirLand Battle and must develop innovative means to fill equipment shortfalls rapidly in the event of mobilization. Third, the productivity of logistic support to the AirLand Battle must be increased. Life cycle costs of weapons systems must be reduced significantly. At the same time the supply, distribution, and maintenance systems must be developed systematically to be responsive and survivable from the industrial base to the battlefield. Development of advanced power generation must provide equipment with reduced signature and simplified logistical support requirements. Finally, improved battlefield casualty management must be developed to speed the return of soldiers to duty. The battlefield requires field medical units with greatly improved flexibility, mobility, and sustainability. Medical technology must be exploited to improve casualty treatment and evacuation. Taken together, these objectives provide the direction which will sustain the Army on the battlefield of tomorrow.

RESEARCH AND DEVELOPMENT

We know that future major conflict will center around land forces and will be marked by the proliferation of advanced technologies which will increase the width, depth and lethality of the battlefield. The early phases of the conflict will be critical in controlling escalation.

Investment in a strong technology base makes common sense. It gives us the institutional knowledge we need to avoid technological surprise that could cause premature weapon system obsolescence. It stimulates innovative applications of new technology, supports advanced systems concept definition, and generates the high leverage technologies of the future. In short, the basic mission of the technology base is to ensure that our soldiers continue to receive the best fighting equipment in the world and are accorded maximum protection, sustainability and supportability on the battlefield.

With congressional support, the Army has been able to maintain its commitment to a strong technology base which comprises approximately 17 percent of total Army RDTE.

A sample of our 1985 technology base accomplishments includes:

- DNA probe for rapid detection of typhoid fever.
- Completion of a basic psychological investigation explaining soldier performance in winter environments.
- Development of methods to accelerate bone regeneration.
- Demonstration of laser eye protection for the individual soldier.
- Low cost helicopter flight simulator conceptual design.
- Demonstration of an uncooled sensor array for night vision.
- Implementation of the joint service hypervelocity missile program.
- Completion of the combat vehicle armament system technology program.
- Successful flight demonstration of the Ground Launched Fiber-Optic Guided Missile.
- Demonstration of a breakthrough in caseless propellant chemistry development for small arms.

The FY 87 budget request is for a 5.5 percent growth to support exploitation of high leverage technologies, support the Army's Key Operational Capabilities and start our university research initiatives program.

Within our limited resources, we are putting our technology base effort into areas which provide the most leverage in offsetting the quantitative—and in some cases qualitative—edge of our potential adversaries. There are areas where the United States has a clear technological lead which can be exploited to increase markedly the combat effectiveness of the Army. By focusing on these areas we are accelerating the transition of high payoff technologies from industry and Army laboratories through the demonstration stage to the field. These high leverage technologies include:

- Very High Speed Integrated Circuits technology insertion which will provide compact computers and processors to enhance automatic target recognition and battlefield information management greatly.

- Advanced visible and infrared technology which will greatly improve our capabilities to detect and identify passively targets at night and during adverse weather conditions.

- Millimeter wave technology which will permit sensors to "see" and terminal homing missiles and artillery rounds to engage targets through battlefield smoke, fog, and dust.

- Research to develop chemical and biological detection systems; and vaccines, antidotes, and other compounds for prevention and treatment of casualties.

- Improved food and technology for the soldier on the integrated battlefield, e.g., lightweight mobile combat feeding system for the soldier in the field that provides high nutrition, prepackaged, labor-free hot meals for the unit on the move.

- Exploitation of computer technology through the disciplined development of software for adaptable, reliable systems.

- Computer-aided increased reliability design, materials selection, manufacturing and inspection techniques to produce much lighter weight combat vehicles for enhanced mobility that require less logistic support.

The nation's research laboratories are the birthplace for high leverage technologies. The FY 87 budget request continues the Army's research program and includes a university research initiative to create up to ten disciplinary centers for research and education. This improved interaction between academia and Army laboratory personnel will pursue two main goals:

(1) Initiate multi-disciplinary research in materials, structures, image understanding, mathematics, control systems and electro-optical signal processing; and

(2) Expand the number of U.S. graduate students and post-doctoral fellows engaged in Army-related research.

Today, the requirement to focus scarce resources to gain maximum capability is more challenging than ever. Whereas our past doctrine and procurement were oriented toward heavy forces, today we must have the capability to engage realistically threats across the full spectrum of warfare. The explosive advancement of technology, coupled with its broad application to weapons systems, makes it even more important to define requirements, develop systems and field hardware in a much shorter time cycle. The Army Materiel Command's four-year, full scale development cycle and two-year technology proof-of-principle demonstration initiatives are concrete steps to shorten this cycle.

FY 87 BUDGET OVERVIEW

We are proud of the Army's accomplishments highlighted in this statement. Our FY 87 budget request will produce further essential improvements in the Army's readiness posture ensuring an Army that is ready, responsive and responsible. To that end, the FY 87 budget request supports improvements and initiatives to enable the Army to respond fully and flexibly to divergent worldwide threats. This is not to say, however, that the budget request is a panacea. On the contrary, the FY 87 budget has been reduced $11 billion since the FY 86 President's Budget was submitted to Congress. Specific areas where the FY 87 budget falls short of our goals will be enumerated later. An examination of the budget request in terms of specific readiness objectives is provided below.

Since the Army depends heavily on people to accomplish its mission, our first objective is manning the Army with sufficient numbers of competent people. The resources requested to support the Army's manpower requirements capitalize on the near term market potential for quality recruits, and focus on trained-in-unit strength improvements. In view of the sophisticated equipment coming into the Army, the recruitment and retention of quality recruits is essential. Dollar resources are requested to support an Active Army of 780,900 soldiers, and a gradual growth in the Reserve Components. A slightly reduced civilian strength has been budgeted to support the Army.

Our second budget objective is training. The resources requested to support training will help build and sustain a flexible and ready force prepared to go to war and win. The FY 87 budget primarily builds on existing training programs, and continues several major initiatives aimed at improving the training effectiveness of today's Army. Although flying hours available for training have been constrained since FY 82, they are currently programmed to increase by approximately 100,000 hours. A continuation of 28 battalion rotations through the National Training Center is also included. Ground operating tempos for training, however, are maintained at 850 miles per combat system. With increased use of simulators, improved training opportunities exist.

Our third objective is to modernize the Army. The FY 87 Army will retain a balanced force of 28 combat divisions, 18 Active Component divisions and 10 Reserve Component divisions. In FY 87, $1.65 billion worth of equipment will be purchased for the Army National Guard and U.S. Army Reserve. However, due to funding constraints, the Army has slowed the pace of its equipment modernization program. The FY 87 budget provides a balanced approach and funds only the most critical equipment needs of the Army.

Our fourth objective addresses the need to mobilize and deploy a force of sufficient size in a timely manner to influence the early stages of conflict. Individual clothing and equipment required for mobilization training base expansion continues to be funded in FY 87, moving the Army gradually toward the capability to outfit all of its trainees during the first 90 days of mobilization. However, the FY 87 budget decreases the growth rate of the war reserve stocks by 43.8 percent below the FY 86 rate. Peacetime operating spares decrease by $67.3 million in FY 87 to $1,815.9 million. The FY 87 budget also includes funding for layaway and maintenance of reserve standby industrial facilities which are critical to wartime production.

Finally, we are continuing the progress toward improving the quality of life for our soldiers and their families. Quality of life issues have a direct impact on readiness and on the commitment of soldiers to an Army career. Quality of life categories include housing, both barracks and family quarters; facilities operations and maintenance; education opportunities; family and religious needs; community, morale and welfare, and recreation services; and health care facilities. The FY 87 budget includes funding for barracks construction and renovation, and facilities maintenance projects, especially in Europe. The FY 87 request for quality of life issues includes an increase of $320 million over the FY 86 request. Furthermore, this level of funding fully finances annual maintenance and repair requirements, and provides funds for an estimated 7 percent decrease in Backlog of Maintenance and Repair.

The Army, however, is concerned about the erratic and inconsistent levels of funding of its programs. Large changes in funding complicate the efforts of the Army to provide a consistent and steady program. Unforeseen decrements to the funding posture hinder the efforts of the Army to plan effectively and implement programs requiring long lead times, multiyear contracts and other cost containment efforts. It also increases the cost of the items purchased.

APPROPRIATION OVERVIEW

The FY 87 budget requests $80.6 billion in Total Obligation Authority (TOA), with outlays of $78.3 billion. The following table shows the FY 87 request in terms of current and constant dollars in comparison with FY 85 and FY 86.

FY 85 totals represent actual obligations and expenditures. FY 86 data represents the current year budget as appropriated by Congress.

($ IN BILLIONS)

CURRENT DOLLARS

	FY 85	FY 86	FY 87
TOA	73.5	77.9	80.6
OUTLAYS	66.7	76.1	78.3

CONSTANT FY 87 DOLLARS

			REAL GROWTH
	FY 85	FY 86	FY 87
TOA	77.7	79.7	80.6
OUTLAYS	70.5	77.9	78.3

Figure 5.1

ARMY BUDGET MIX

The cost of maintaining the Army falls under three major categories: (1) Operation and Maintenance, (2) Military Personnel, and (3) Investment accounts.

Operation and Maintenance accounts have remained constant between FY 86 and FY 87 at 31 percent of the budget, with a total of $25.2 billion in FY 87.

The Military Personnel category contains $28.6 billion in Total Obligation Authority. The Military Personnel accounts have remained constant in the Army budget at 36 percent for both FY 86 and FY 87.

The Investment accounts contain $26.8 billion and represents 33 percent of the budget, the same as in FY 86.

BUDGET HIGHLIGHTS

- Maintains level Active Component strength and reflects a slight reduction in civilian strength.
- Accelerates U.S. Army Reserve Paid Drill Strength, capitalizing on near term market potential for quality recruits; and focuses on trained-in-unit strength improvement.
- Supports light infantry division initiatives to include divisions at Forts Drum and Wainwright.
- Funds 94.5 percent of depot maintenance.
- Promotes efficiency through automation.
- Increases quality of life.
- Maintains operating tempo of training at acceptable level.
- Slows our improvement in wartime sustainability.
- Improves security against terrorist activity.
- Provides new forward area air defense program.
- Slows procurement program.
- Meets requirements for weapon systems fielding.
- Funds equipment for:

14 Abrams tank battalions
11 Bradley battalion equivalents
7 Apache Attack Helicopter battalions
3 Black Hawk helicopter company equivalents
3 medium helicopter transport companies (CH-47D)
4 MLRS batteries
12 Patriot batteries

- Improves lightweight mobile combat feeding system for the soldier.
- Increases development of advanced missile and infrared technology.
- Improves integrated circuits technology for automatic target recognition and battlefield information management.
- Builds 108 mobile home sites.
- Constructs 3,412 new family dwelling units (including 120 attic units):
- 2,608 units in CONUS.
- 668 manufactured units in Europe.
- 136 other.
- Upgrades 1,359 substandard housing units into 1,124 adequate units.
- Improves energy efficiency in over 11,887 units.
- Provides whole house renewal for 2,520 units.

FY 87 ARMY POSTURE STATEMENT ACRONYM LIST

AAWS-M - Advanced Anti-tank Weapon System - Medium

ABGD - Air Base Ground Defense

ABO - Agents of Biological Origin

AC - Active Component

ACS - Army Community Service

ACCS - Army Command and Control System

ACE - Armored Combat Earthmover

ADDS - Army Data Distribution System

ADEA - Army Development and Employment Agency

AFAP - Artillery Fired Atomic Projectiles

AFATDS - Advanced Field Artillery Tactical Data System

AFCS - Army Facilities Component System

AFQT - Armed Forces Qualification Test

AGS - Armored Gun System

AHIP - Army Helicopter Improvement Program

AMC - Army Materiel Command

AMEP - Army Medical Enhancement Program

AMT - Army Modernization Training

ARNG - Army National Guard

ARTBASS - Army Training Battle Simulation System

ASAS - All Source Analysis System

AWOL - Absent Without Leave

BFV - Bradley Fighting Vehicle

BNCOC - Basic Noncommissioned Officer Course

C3 - Command, Control, Communications

CAS3 - Combined Arms and Services Staff School

CE - Chemical Energy

CINC - Commander-in-Chief

COHORT - Cohesion Operational Readiness Training

CONUS - Continental United States

CPX - Command Post Exercise

CSS - Combat Service Support

CVC - Combat Vehicle Crewman

CW/CBD - Chemical Warfare/Chemical Biological Defense

DIVAD - Division Air Defense

DMAR - Deferred Maintenance and Repair

DSCS - Defense Satellite Communications System

ECWCS - Extended Cold Weather Clothing System

EMP - Electromagnetic Pulse

ENSCE - Enemy Situation Correlation Element

FAASV - Artillery Ammunition Support Vehicle

FEBA - Forward Edge of the Battle Area

FISTV - Fire Support Team Vehicle

FLIR - Forward Looking Infrared Radar

FLOT - Forward Line of Own Troops

FOE - Follow-on Evaluation

FORSCOM - Forces Command

FRG - Federal Republic of Germany

FTX - Field Training Exercise

GSM - Ground Station Modules

HEMITT - Heavy Expanded Mobility Tactical Truck

HMMWV - High Mobility Multipurpose Wheeled Vehicle

HTMD - High Technology Motorized Division

IEW - Intelligence, Electronic Warfare

ILS - Integrated Logistics Support

IMA - Individual Mobilization Augmentee

IRP - Installation Restoration Program

IRR - Individual Ready Reserve

ISR - In-Service Recruiters

ITMS - Integrated Training Management System

JCS - Joint Chiefs of Staff

JDS - Joint Deployment System

JFDP - Joint Force Development Process

JTIDS - Joint Tactical Information Distribution System

KE - Kinetic Energy

LAW - Light Antitank Weapon

LHX - Light Helicopeter Family

LIC - Low Intensity Conflict

LOTS - Logistics-Over-the-Shore

MANPRINT - Manpower and Personnel Integration

MCA - Military Construction, Army

MCS - Maneuver Control System

MEET - Minimum Essential Equipment for Training

MICAF - Measuring Improved Capabilities of Army Forces

MILES - Multiple Integrated Laser Engagement System

MILSTAR - Military Strategic and Tactical Relay

MIP - Model Installation Program

MLRS - Multiple Launch Rocket System

MMS - Mission Management System

MOS - Military Occupational Specialty

MOUT - Military Operations on Urbanized Terrain

MPGS - Mobile Protected Gun System

MSE - Mobile Subscriber Equipment

MSO - Military Service Obligation

MTMC -Military Transportation Management Command

MTM/D - Millions of Ton Miles per Day

NATO - North Atlantic Treaty Organization

NBC - Nuclear, Chemical, Biological

NCO - Noncommissioned Officer

NCOES - Noncommissioned Officer Education System

NDI - Non-Developmental Item

NMS - New Manning System

NORTHAG - Northern Army Group

NPS - Non-Prior Service

NTC - National Training Center

NTV - Non Tactical Vehicle

O&S - Operation & Support

OCIE - Organization Clothing and Equipment

OCS - Officer Candidate School

ODT - Overseas Deployment Training

OMG - Operational Maneuver Group

OMNIBUS - Operational Readiness Analysis

OPMS - Officer Personnel Development Study

OPTEMPO - Operating Tempos

PII - Pershing II

P&A - Personnel and Administration

PASGT - Personnel Armor System Ground Troop

PDOS - Professional Development of Officers Study

PIVADS - Product Improved Vulcan Air Defense System

PLARS - Position Location Reporting System

POMCUS - Prepositioning of Materiel Configured to Unit Sets

POST - Passive Optical Seeker Technique

POV - Privately Owned Vehicles

RAM - Reliability, Availability and Maintainability

RC - Reserve Components

RDA - Research, Development and Acquisition

RDTE - Research, Development, Testing and Evaluation

RDX/HMX - Research Department Explosive and High Melt Explosive

REFORGER - Return of Forces to Germany

RMP - Reprogrammable Microprocessor

RMTS - Regional Maintenance Training Sites

ROTC - Reserve Officers' Training Corps

RSTA - Reconnaissance, Surveillance and Target Acquisition

RTC - Regional Training Center

RTC-MED - Regional Training Sites - Medical

SA - Security Assistance

SARDARM - Sense and Destroy Armor

SCAT - Scout/Attack

SCOTT - Single Channel Objective Tactical Terminal

SDI - Strategic Defense Initiative

SIMNET - Simulation Networking

SINCGARS - Single Channel Ground and Airborne Radio System

SMART - Supply and Maintenance Assessment Review Team

SMP - Simultaneous Membership Program

SOCOM - Special Operations Command

SOF - Special Operations Forces

SRB - Selective Reenlistment Bonus

STARS - Surveillance Target Attack Radar System

STRAC - Standards in Training Commission

SUPE - Soldier and Unit Performance Enhancement

TACCS - Tactical Army Combat Service Support Computer System

TACMS - Tactical Missile System

TACOM - Tank Automotive Command

TC ACCIS - Transportation Coordinator Automated Command and Control Information

TDA - Table of Distribution and Equipment

TGW - Terminal Guidance Warhead

TLR/S - Total Logistics Readiness/Sustainability Study

TOA - Total Obligation Authority

TOE - Table of Organization and Equipment

TOPS - Transportation Operational Personal Property Standard System

TOW - Tube Launched, Optically Tracked, Wire Command-Link Guided

TRADOC - Training and Doctrine Command

TRI-TAC - Joint Tactical Program

UAV - Unmanned Aerial Vehicle

UCOFT - Unit Conduct of Fire Trainer

USAF - U.S. Air Force

USAR - U.S. Army Reserve

USAREUR - U.S. Army, Europe

USMA - United States Military Academy

USMC - U.S. Marine Corps

USARS - U.S. Army Regimental System

VE - Value Engineering

Senator Wilson [presiding]. Thank you, General Wickham.

General Wickham, you have already responded to some of the questions I had. You mentioned there were certain trouble spots or areas. You mentioned the Bradley fighting vehicle is one.

Do I understand that with the needed spall liner that you believe that the Bradley fighting vehicle meets your survivability requirements?

BRADLY FIGHTING VEHICLE

General Wickham. Sir, we are conducting the second phase test with the Bradley now. We fired nine shots against the Bradley that had been equipped with a spall liner and with reactive armor on the outside, explosive armor as well as limited restowage of munitions inside. These nine tests have demonstrated that these improvements do increase its survivability. We intend to go substantially beyond the nine shots with tests that should be completed by the middle of June. We will have a report ready for the Congress in early August. We believe that these tests will demonstrate that this modest improvement, which should cost about $75,000 per vehicle, makes good sense and substantially reduces its vulnerability.

Senator Wilson. By that do you mean that you think you will have created a situation where soldiers' lives are not imperiled in an unacceptably high level?

General Wickham. Yes, sir. Obviously, the armored personnel carrier as a system, the M113 or the Bradley, can never fully protect the occupants against overmatching weapons such as a 120 millimeter shell which will go right through it. The Bradley fighting vehicle is not designed to be a tank. It is designed to work hand in glove with the tank to capitalize on maneuverability, speed, cover, and protection from the terrain so that they can dismount and fire and capitalize on its capabilities. It is not meant to ride up on the objective like a tank.

We are never going to be able to protect the infantry against large caliber shells, but we can protect the infantry against smaller shells, artillery fragments, and against smaller rounds such as 30 millimeter shots.

Senator Wilson. Could you improve it and improve the survivability by adding to its armor without sacrificing speed and maneuverability?

General Wickham. We think that with the reactive armor we will add sufficiently to assure that a number of shells that previously penetrated would not penetrate. Most modern armies are moving to protect their infantry carriers with reactive armor. So, this just makes eminent good sense to do. If we were to put heavy steel plates on the vehicle and try to make it into a tank, it would just never be able to keep up with the M1 tank.

BRADLEY FIGHTING VEHICLE EMPLOYMENT

Mr. Marsh. Could I add a comment to what General Wickham said?

Senator Wilson. Please.

Mr. Marsh. The ultimate safety and vulnerability of the Bradley will be determined by the tactical knowledge of the commander of the company that employs those vehicles in combat. I will say to you that the Bradley fighting vehicle will, when measured with similar vehicles of the armies in the world, demonstrate it is as good as, and really is better than anything else that is now in the inventory of any other country in the world.

Senator WILSON. The questions that I am asking really have a basic concern that it is technology rather than dollars that are limiting the ability of this vehicle to protect its occupants.

Mr. MARSH. I think once you put any armored personnel carrier, whether it is a Bradley fighting vehicle or not, in a heavy tank environment where it ought not to be, there is not going to be any technology that will give it invulnerability to heavy armor. We might as well go ahead and build a tank.

General WICKHAM. That is right. It is the tactical concept that employs the tanks, the heavily protected tanks and its heavy gun system and the armored infantry carriers' fighting vehicles that minimizes the vulnerability of the infantry. No commander using good sense will drive these relatively thin-skinned vehicles in the face of overmatching weapons. He is going to have to capitalize on the ground, and I have been there. He will capitalize on the use of tanks and their shock effect and the maneuverability of the armored carriers to capitalize the terrain. By maneuver the infantry can then dismount and maneuver through forested areas to bring to bear all their fire power and weapons maneuverability to overwhelm the enemy. We are not going to drive him straight up on the objective.

FISCAL PROGRAMS CUTS

Senator WILSON. Secretary Marsh, you said you are in the midstream of the Army's modernization effort. I take it from the charts that we have seen that what you feel is necessary to complete that is funding to which you do not look forward in a time of the kind of constraints that was illustrated in your last chart.

If that be the case and you are compelled to curtail that modernization program, or I should say not curtail modernization, but curtail your plans to both maintain and modernize the Army, if we have to cut someplace, what do you view as the place where you can cut with the least damage?

Mr. MARSH. Let me respond by saying where we would cut, and what would cause the most damage. Our position has been that we should continue to protect personnel. That the personnel and their quality of life and the quality of people that we are bringing in is absolutely essential to the Army. Then we would say that the continued development of professionalism of our noncommissioned officer corps as a part of that is very, very important. In the past we have sought to try to maintain a modernization program by stretching it out. When we do that, you are going to pick up increased costs, as you are aware.

We have cut back in the areas of operation and maintenance which has had an impact on readiness, particularly when you look into things like flying hours and driving hours and ammunition fired and this sort of thing. I would say to you we will probably cut back in those areas before we would cut back on those systems that are currently now under consideration in the Army. I think that those systems that we have now have come on far enough that it would be extremely unwise not to continue them.

Now, if you have a sequestration of funds, as that which occurred last year under the Gramm-Rudman-Hollings proposal, which is a device to introduce discipline in the Federal financial structure, there you had an exception last year for personnel. However, if you have that kind of decrement this year, there will not be any such flexibility currently as it is in the law. So, your accounts will be decremented at a prorated amount across the board. This decision will really be made for us by others and it would include modernization, personnel and all other programs. If that should occur, although the President's budget, as I am sure you are aware, envisions that it will not occur, we will comply with any such mechanism that would cause automatic reduction.

Senator **Wilson**. That is true. However, I would ask you to respond, if not now, at least for the record. I think you may find yourself in a position where you are compelled to cut, you will not be doing so in response to a sequestration order, but even if that were facing you, I do not think that you are compelled to look for the alternative of important reductions within the total Army.

It is up to you to determine how you want the money spent. I share the concern about maintaining quality of life and the quality of personnel in recent years. It would seem to me one of the hard questions you have to ask yourself is whether or not in order to achieve the maintenance of that high level, you may not be looking at a reduction in end strength.

[The information follows:]

Army Priority Programs

We will protect the programs that support the force structure and the soldier and his family. We must do this, because it is the only way we can ensure that we have the quantity and quality of the force required to carry out the missions assigned to the Army by the National Command Authority.

For the past several years the Army has maintained an active end strength of 781,000, giving us the smallest Army in 36 years. In the face of an increased worldwide threat, we have accepted significant risk to our national security by the budgetary constrained size and capabilities of current and programed forces. Any reduction in force structure would place the achievement of our national security objectives at risk. This would result from our alliance commitments being undermined and the ensuing adverse impact upon planned allied growth.

We have protected our readiness through recruiting and retaining quality people, improving our training, fielding more capable equipment, and increasing our support programs. Any reduction in this area would undercut the significant gains made over the last few years

Proper execution of AirLand Battle doctrine requires modernized weapon systems. We are only partway in our modernization effort now, and any delay would push the completion of this effort into the late 1990's, as well as increase the per unit cost.

Furthermore, our ability to sustain the CINCs' war fighting capability requires continued support. The Army has invested substantial resources in the modernization of war reserve stocks, concurrent with the modernization of our forces, however, significant shortfalls remain.

END STRENGTH

Mr. **Marsh**. We made that decision about reducing end strength 5 years ago. The projected end strength of the Active Army, if you look at 1980, would have had you well in excess of 800,000 now. We then decided that that would not be a wise course, but we felt that in the national interest and to carry out the missions that are given to the Army by the National Command Authority, that the minimum risk Active Force we could have could be structured within the strength of 781,000. The recommendation for the number of Army divisions made by the Joint Chiefs of Staff that has been on the books for some time is significantly more than those we have now in the Army. Consequently, a decision to discipline the appetite was made in 1983 and Active strength was pegged at 781,000 to achieve a level of modernization for what was considered to be the minimum size force to carry out the directives of the National Command Authority and to implement the kind of strategies based on technology and leadership and doctrine associated with the AirLand Battle. I will tell you that, in my view, any reduction of the Army below 781,000 is beginning to get this country in harm's way.

Senator **WILSON**. Thank you, Mr. Secretary.

Senator Exon.

Senator **EXON**. Mr. Chairman, thank you very much.

Welcome, Mr. Secretary, and welcome, General. We are delighted to have you here this morning on this very important hearing. Let me ask you two questions.

ANTITANK WEAPONS

Specifically, where are we on infantry anti-tank weapons?

That remains a concern I think to you and to us. Which side is winning the race for more armor on tanks on one side and anti-tank weapons on the other?

Certainly the infantryman is very much concerned about this.

Do you believe it is possible for us to develop in the near future an anti-tank weapon that will give our soldiers, particularly in the European theater, more of a weapon against possible onslaught of enemy tanks than we have right now?

General **WICKHAM**. Yes sir, we do. We are moving ahead with the light anti-armor system, something to replace the light anti-tank weapon—LAW—that we have now. This is the AT–4 which we are now buying from Sweden, but much of the requirement will be produced in the United States. This weapon reaches out about 500 meters to destroy armored vehicles.

The medium system that we already have in the service now is the Dragon and we need to replace that. We will go out with a request for proposal in the next few days to see what industry can provide in a way of a medium system that will reach out about 2 kilometers. This is known as the Advanced Anti-Tank Weapon System [AAWS-M]. We are looking to the most sophisticated technology that will be available to us to kill either from top down or other methods of kill. It will be a man-portable system to replace the Dragon.

TUBE LAUNCHED OPTICALLY TRACKED WIRE

We are also looking to replace the command link guided TOW system, even though we have upgraded the TOW over the years. Now we have to look beyond TOW 2 and some of the technology associated with the medium system, the AAWS-M could very well be applicable to the heavy system to replace the TOW. I think we are moving ahead with alacrity here in dealing with the fundamental issue you raise.

Mr. MARSH. Senator, could I add a comment to that?

Senator EXON. Certainly.

ARMOR AND ANTITANK TECHNOLOGY ADVANCES

Mr. MARSH. You put your finger on the heart of a major problem that really has gone unnoticed by the general public in the last 20 or 30 years. In the tank and anti-tank systems you have what might be called a double-mirror system. When you go and develop a better armor, you go and develop a better gun. Then you thicken the armor and you go back and produce a different round. So, there is this constant effort being made on upgrading armor and upgrading anti-armor. It becomes increasingly difficult because you are in a fast-moving scene and the capabilities on both sides change very, very rapidly, which requires enormous investment.

The evolution of the Soviet tanks which are now the T-62, T-64, T-72, and T-80, show their improvements in the upgrading of armor and improvement in their gun system. The Soviet 125 mm gun, in addition to firing a regular round will also fire a missile type round. So, that compounds the problem of developing the type of system that you want for an infantryman, something he can carry and knock out a tank at a 1,000 meter range.

General WICKHAM. Optimally, it would be beyond 1,000 meters and we would hope to get out to 2 kilometers.

That gets back to the point that Senator Wilson was raising about the Bradley and what we are trying to do to product improve the Bradley. The product improvements that are necessary are a derivative of technology, but also the nature of the threat. We are double mirroring what the Secretary talked about. My guess is that we are going to have to product improve other systems just the way other services product improve their own.

Senator EXON. Gentleman, we talk about the way to kill a tank. Maybe we are reaching the place where we are going to have to say, well, we are never going to have a shoulder-fired weapon that is going to do this job.

Should we have a jeep or other smaller vehicle mounting of some type with the infantryman to give him something other than a shoulder-fired mechanism to meet this threat?

General WICKHAM. I do not think so, sir. The technology is moving very rapidly. We believe with this medium system, the technology is available. The Swedish already have developed a system that will reach out 2 kilometers and kill a tank from the top down.

Senator EXON. Are you talking about the latest Soviet tank? Will it do that to it?

General WICKHAM. Top down, it depends, yes, for the latest Soviet tanks that are fielded. Will it kill top down the tanks that are to be fielded 10 years from now that will put reactive armor on the top? Probably not. There again, you can product improve the system to be able to deal with that. We are also stretching the state of the art, no question, in terms of protection of tanks. But, if we think it is absolutely essential, we will proceed to see what technology can provide for in the way of a shoulder-fired system of medium weight for the soldier.

RESERVE COMPONENT

Senator EXON. Let me ask a question in regard to our Reserve Forces.

Is it militarily sound to consider the Reserve component ground forces to be as ready as their Active duty counterparts?

I really think we are getting into that posture. Certainly I think your likely response will be that we have to continue to improve our Reserve Forces and funding and training and other opportunities they have.

Are we not overrelying under our present strategy on the ability of the Reserve components to be as effective as we would expect them to be with our present operational planning?

Mr. MARSH. Senator, I would say to you that the concept, as you observed, flows from the all-volunteer force and out of that comes the total Army which envisions Active, National Guard and Army Reserve component participation.

I speak to you from having served on active duty, having served in the Reserve Force for 4 years and having served in the National Guard for 25 years. The Army Reserve and National Guard I see in the 1980s is not the same Guard and Reserve that I saw in the 1970s and 1960s when I was in it. I will say that there are some units in combat service support, particularly like the scene you saw, road building in Panama, that the regulars will tell you are better than Active units because they have in them skills that are systemic, like dozer operators, backhoe operators, surveyors, and engineers. Their performance in Panama and in Honduras has been exemplary from the standpoint of skills. Also you can find that in some of our transportation units. The level of capability has vastly increased in the National Guard and Army Reserve. This was evidenced by the deployment to Reforger this year of 4,500 members of the Wisconsin Army National Guard, in the largest overseas deployment in peacetime of the National Guard in our country's history. The marshalling, the loading, the inventory of equipment, the moving from Wisconsin of the equipment to Baltimore for shipping and loading and off-loading and deploying in Germany, met any standards that the Army would have wanted met.

It is true the units performed very well in Reforger, but they had not been assembled together on the ground as much as the Active units and this is where their training is so important. We have had other National Guard units at the National Training Center in California and I think the Army has been very pleased with their performance and see areas where they need to be strengthened.

I will say to you that several divisions of the Army have only two Active brigades and they each have a round-out brigade, mostly National Guard. There is an exception where there is a round-out Army Reserve brigade and there will be two shortly. Those round-out units, when associated with the Active units, have a level of performance and proficiency that is quite high. A rising tide raises all the ships. With support that comes from the Active force when Reserve components are part of the unit, so to speak, as a roundout, you get a very significant improvement because you get staff assistance from the command and you can get NCO assistance from the Active command which has a very beneficial effect.

Senator **Exon**. I suppose I will agree with that.

The question I want to address, and you mentioned Wisconsin, I guess I am continually worried about the role we see for the Reserve and Guard forces and the important part they will play.

I am simply trying to say, are we not providing enough resources to that important part of our defense posture and are we not overplaying our hand somewhat with what the total concept is and the forces that we have available, their training, manpower, and so forth?

General **Wickham**. I do not think we have stretched it to the limit but we may be approaching it. About 50 percent of the total Army and its combat capability comes from the Reserve component. About 70 percent of the total Army combat service support comes out of the Reserve component. Any major operation we are going to be involved in inextricably is tied to the Reserve component.

The state of training, the state of readiness, the quality of the soldier have never been better, but we must have continued funding from the Congress. If we do not put the new equipment in that we have planned to, to the tune of about $2 billion a year we are then short over $11 billion of equipment in the Reserve components; if we do not man them with full-time personnel to a modest level of 10 to 14 percent in the units; if we do not provide funding for overseas training exercises and for simulators that will enable them to capitalize on their limited training time, then you are right, we are overemphasizing the National Guard and Army Reserve. We do not think so, given the programs we have asked funding for in the budget. We think it is cost-effective security.

Senator **Exon**. Thank you. One last question, Mr. Chairman.

What one or two significant changes that you see in the Soviet Army are of most concern to you as Secretary of the Army?

SOVIET ARMY CAPABILITY

Mr. **Marsh**. You are seeing in the Soviet Army continued modernization of their divisions, and of their capability to produce armaments. Their armor is very significant. You are also seeing some very significant changes in command and control and I will say to you, Senator, that may be the most ominous change.

With that change is coming a concept called the Operational Maneuver Group which combines both firepower, communications, and tactics. Using better radio communication would bring into a more coordinated focus the enormous firepower and armor that exists in the Soviet Army, but I think that probably has not had the same coordination effect that it will have on the Operational Maneuver Group.

General **Wickham**. The one that would leap out at you is the technological wave that is breaking over the Soviet armed forces.

They are catching up to our technological edge and we are beginning to see it replicated in their helicopters. They have a Hokum helicopter that is coming on line in the near term here that will challenge the LHX as a helicopter. We see improvements in their tanks and in their antitank systems, and we also see it in their aircraft. So, they are seizing technological opportunities and they are pushing it into their forces as rapidly as they can. When a nation spends 17 percent of its gross national product on the military year in and year out, it does make a difference in terms of quantity and quality.

The second issue, as the Secretary indicated, is the aggressive intent of their exercises. They exercise maneuver forces more than we do and in larger dimensions. They have an AirLand Battle concept, too. The operational maneuver groups they speak of, divisions or corps, will break through and operate in a fluid way in the rear areas of NATO. They exercise the use of reconnaissance strike complexes to reach deeply in the battlefield and strike targets as part of their AirLand battle.

CHEMICAL WEAPONS CAPABILITIES

They are willing to exercise in a realistic way about war. They are also willing to use in their exercises chemical weapons and they have an extraordinary edge in the way of stockpiles of chemical weapons.

Senator Exon. Is that their main edge right now, General?

General Wickham. I think it is one of the main edges they have on us, their chemical capabilities that they have developed and their stockpiling of them. Only 10 percent of our stockpile of chemical weapons is militarily useful. We must get on with binary production. We have a long way to go.

Senator Exon. Thank you, General.

Thank you very much, Mr. Chairman.

Senator Warner. Mr. Secretary, I commend you and the General for another successful year. This is your sixth year; is that right?

Mr. Marsh. I am starting my sixth year, yes, sir.

Senator Warner. That will set a record.

Mr. Marsh. Not quite, but almost.

Senator Warner. I dare say you will establish that record and one that will be long remembered in the Department of Defense.

Mr. Secretary, the Divad having now been terminated and the Army proceeding to develop a follow-on system, I bring to your attention—it is necessary to do so—the issue of interoperability, it is one that I become seriously interested in as a member of this committee.

What assurances can you provide that the follow-on system will be not only interoperable among the branches of the U.S. military services, but also with our allies?

AIR DEFENSE INITIATIVES

Mr. Marsh. Senator, the division air defense issue is one that is of such great concern in the Department of Defense that Mr. Weinberger has really escalated it to his level and the Army makes periodic presentations to him as to where we stand and what the concept will be for the follow-on system.

I would say to you, and General Wickham may wish to amplify on this, that the follow-on system will be a combination of different systems that will meld together a total air defense envelope. This will include the use of missile capability, it will include gun capability, and it will probably include incorporating the gun systems of the Bradley and maybe even the M-1. It will envision the use of weapons where you could fire deep into areas that are in defilade.

Senator WARNER. Mr. Secretary, I do not doubt all of that. The question is: Can you give us assurance that it will be interoperable with the Air Force, to an extent with the Navy?

COMMUNICATIONS INTEROPERABILITY

Mr. MARSH. I think there is no question about it, Senator, because the systems I am describing are really the technology systemic to all the services. In fact, the portion of the air defense system will be a greater reliance on the Air Force, so we will be using their system.

Senator WARNER. Then with respect to our allies, the interoperability?

Mr. MARSH. I would say that we would anticipate there being interoperability. The interoperability usually relates to communications. Although I am not certain what the radio net would be used, but to the extent it is MSE in the new system, it would then be fully interoperable. In reference to SINCGARS it is interoperable except interoperable only on a single band, single mode, single channel, secure.

Senator WARNER. Mr. Secretary, I am going to defer to the Senator from Texas here who has been waiting patiently. Then I will return to my questions.

Senator GRAMM. Let me thank my dear colleague from Virginia.

REMOTELY PILOTED VEHICLE—AQUILA

I want to ask you about the Aquila program. Can you give me an update on it? What improvements have been made, what your plans are for that system?

General WICKHAM. We have a television tape on that here. It might begin to answer that question about how well we are doing with Aquila.

Senator GRAMM. Did we have this arranged?

General WICKHAM. No. We did not know you were going to ask the question, but we are prepared to answer it. As you know, the Aquila system is far more capable than any system extant in the world. It is jam proof and it is secure in terms of its communications, depth of flight and longevity of the flight. It can "lase" for the Copperhead and other systems. We have some problems with it, but the contractor is funding resolution of most of those problems. We think we are well on the way toward fielding a very capable system that we need.

Senator WILSON. Senator Gramm, the Army is always prepared. [Film presentation.]

General **Wickham**. Aquila is going to lase moving tanks for a Copperhead artillery round. There is a tank moving and the RPV is going to lase it and you see he hit it, a moving tank. Here is another and there is another tank that will be destroyed.

That shows we are beginning to get a handle on dealing with their real time problems. We are pursuing acquisition of nine batteries of this system.

Senator **Gramm**. So, you feel confident, given the upgrades the contractor is making, that the system will work and that you want it?

General **Wickham**. Yes, sir.

Senator **Gramm**. Thank you.

Senator **Warner**. As a follow-on to that, you are working, General Wickham, with the Air Force to develop JSTARS.

What is the Army doing to develop and improve reconnaissance capability at the fighting level with the RPV's?

RECONNAISSANCE INTEROPERABILITY

General **Wickham**. Let me come back to the first question you asked the Secretary, sir, and then come to that one about the interoperability with the air defense.

The key element of interoperability in NATO is the identification friend or foe (IFF) system. We are developing an interoperable system that works with NATO and with the Air Force so that we can query in a positive way any aircraft and determine whether it is friend or foe. You are right on in terms of the interoperable issue and that is the key element in the whole area of an air defense system.

Back to the question you raised about our ability for reconnaissance at the battalion level. Of course, the Army systems that are going to be able to provide intelligence down to the tactical battle level are the Guardrail OV-1 Mohawk aircraft system that we have and continue to modernize for intelligence collection, and for direction finding, the Aquila RPV that can provide real time target intelligence, eight-digit coordinate data for targets that it sees and is jam-proof. That information can go down to the lowest level at which we can mount an attack. So, I think there are a number of systems that the Army is developing that will give us improved capability. We must, however, continue to rely on the joint system that the Air Force is able to provide for longer-range vision into the battlefield and assure linking down so that we can make use of the real time information that JSTARS will provide.

Senator **Warner**. Thank you, General.

General, we view your service over here with a great deal of pride.

General **Wickham**. Thank you, sir, I appreciate it.

Senator **Thurmond**. General Wickham, I believe you mentioned that 13 percent of the Army's budget will be devoted to the Guard and Reserve this year.

Is that correct?

General **Wickham**. That is right, sir.

Senator **Thurmond**. I estimate that is about $10 billion; is that correct?

General WICKHAM. It is a little over $10.3 billion.

RESERVE COMPONENT EQUIPMENT DISTRIBUTION

Senator THURMOND. Would you tell us what is the equivalent such as M1 tanks, Black Hawk helicopters, and Bradley fighting vehicles will be procured for the Guard and Reserve in 1987?

General WICKHAM. I can give you the precise numbers in the record.

[The information follows:]

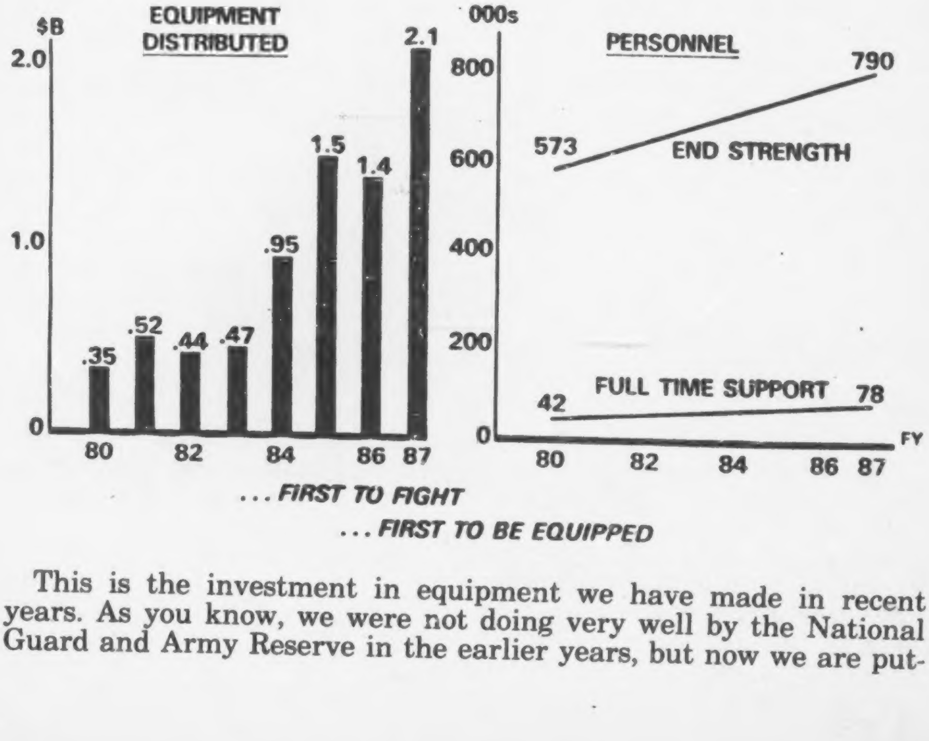
NEW EQUIPMENT FOR ARNG AND USAR IN FISCAL YEAR 1987

Procurement for M1 tanks, Black Hawk helicopters, and Bradley fighting vehicles for the ARNG and USAR in fiscal year 1987 is as follows:

	ARNG	USAR	Total
M1 Tank	120	0	120
Black Hawk Helicopters	15	21	36
Bradley Fighting Vehicles	0	0	0
Quick Fix Helicopters [EH-60A]	6	0	6

If I may have chart No. 8, again please to illustrate the magnitude of the 1987 investment that we are asking for. You were not here, sir, when I covered this point. This shows the growth in end strength of the National Guard and Army Reserve and the growth in full-time cadre support.

RESERVE COMPONENTS



. . . FIRST TO FIGHT

. . . FIRST TO BE EQUIPPED

This is the investment in equipment we have made in recent years. As you know, we were not doing very well by the National Guard and Army Reserve in the earlier years, but now we are putting substantial resources, in excess of a billion and a half, and in 1987 it is $2.1 billion of new equipment. In addition to that, you have the trickle down of displaced equipment that is repaired and put in the National Guard. In the 1988 budget we just closed now through OSD, we are talking of $2 billion then and beyond.

Senator THURMOND. Thank you very much.

General WICKHAM. South Carolina is going to get an M1 fielding in 1988.

Senator THURMOND. Thank you very much.

As time goes on, I believe the services are recognizing more and more the value of the Guard and the need for having it not only trained, but equipped, too, because if we have an emergency, they will be needed immediately, as I understand your plans?

General WICKHAM. That is right, sir. As you know, if we go to war tomorrow, we go with the total force. We used the National Guard and Army Reserve in Grenada, and the exercises that we have undertaken such as Capstone exercises, Reforger in Europe, and other countries, do involve National Guard and Army Reserve units deployed.

Senator THURMOND. Is there anything else either one of you would like to say now?

Mr. MARSH. Senator, again to thank you personally and to thank this committee for the help and support they have given us in the last 4 or 5 years, because we think that we can show that you have made some wise investments by the quality of the Army you have. We invite you to go out and see those soldiers you have been able to help. We appreciate it very much.

BALANCED FORCE EFFORTS

General WICKHAM. We do appreciate, from the uniformed side, the strong support, the vital support that you personally and members of the committee have provided to the Army.

You began your statement here with a query to us about systems we have not funded adequately, in your view, in terms of modernization. As you know, the services try to build a balanced force, given the top line they have tried to work within. We have tried in 1987 as we are now doing in 1988, to build a balanced force, one that is balanced between structure, modernization, quality of life, sustainability, research and development to present to the Congress. The modernization program for the Army is only a third of the way though. We need your continued support in order to modernize the force, both the Reserve components as well as the Active component.

Senator THURMOND. I plan to take a trip probably in May, the latter part of May, to NATO and the other top commands in Germany and in England. I believe most of our commands are there, are they not?

General WICKHAM. Yes, sir, a third of the Army is in Europe.

Senator THURMOND. I will tell Colonel Douglas to confer with you and obtain any suggestions you have concerning that trip.

Mr. MARSH. Senator, we are already working on that trip for you.

Senator Thurmond. I want to make it as valuable and helpful to the Army and myself as I can. In fact, to all the services, the Navy and Air Force, too.

I want to thank both of you for the service you are rendering the country. Just keep up the good work.

Mr. Marsh. Thank you, sir.

[Questions for the hearing record with answers supplied follow:]

Questions Submitted by Senator John Warner

FORWARD AREA AIR DEFENSE

Senator Warner. I noted recently that, since the Army has terminated the Sgt. York Division Air Defense Gun (DIVAD), you plan to spend $9.3M on your Forward Area Air Defense System. The Command, Control and Intelligence portion alone is estimated to cost over $717M. Air Force tactical air (and, on occasion, Navy tactical aircraft) must be able to operate within the theater in conjunction with Army Air Defense. I want to be assured that the Army's plans for this system have been thoroughly coordinated with the other services. Will this system be interoperable also with our NATO allies? We can't afford a $9.3B interoperability problem.

Mr. Marsh. FAAD C^{3}I is designed to interface with other service Air Defense Systems through the medium and high altitude air defense Joint Tactical Information Distribution System (JTIDS) net. In the NATO arena, an interoperability STANAG for Short Range Air Defense Command and Control is being developed. Additionally, we have ongoing discussions with the Federal Republic of Germany on interoperability between the German SHORAD C^2 System and ours, both of which are in development. We are making good progress on this. At the next series of discussions, representatives from France and Great Britain are expected to be present.

FAAD AIRLAND BATTLE DOCTRINE

Senator Warner. Also, all of this air defense effort, as I understand it, is focused at the Divisional Level. The AirLand Battle doctrine states that the Corps Commander fights the battle. I have seen no programs, no money in place to develop Command and Control for Air Defense at the Corps level. Have we given the Corps Commander the command and control tools necessary to accomplish this responsibility?

General Wickham. The Army Command and Control system (ACCS) is being developed to provide commanders at division level essential tactical information dealing with all five nodes of the ACCS (Maneuver, Field Artillery, Intelligence, Combat Service Support and Air Defense). The currently funded Air Defense command and control program procures equipment for the Corps Chaparral Battalions. While we have defined the overall Corps Air Defense Brigade command and control requirements, we are using the Air Defense testbed and the newly formed Corps Air Defense Brigade at Fort Lewis to refine requirement issues for incorporation of Hawk into the Corps Air Defense structure. Our goal is to procure one set of Corps ACCS equipment per year beginning in FY 1991.

LHX—TILT-ROTOR TECHNOLOGY

Senator Warner. I have followed closely the Army's LHX program. I was surprised that you eliminated early a tilt-rotor candidate. It is my understanding that our intelligence estimates for Soviet helicopters for the period of late 1990/2000 indicate that they will have a significant speed advantage over the proposed LHX. Why didn't you give more consideration to the tilt-rotor technology that is being incorporated in the Marine Corp's OV-22 Osprey?

General Wickham. The Army has extensive experience with tilt-rotor aircraft, having flown the Bell Textron XV-15 approximately 575 hours. Although the XV-15 was a technical feasibility demonstrator, valuable information was gained that allowed the Army to make a configuration decision. The Light Helicopter Family (LHX) will be a helicopter because it must be lighter weight, more survivable, lower cost and more available than would be possible with an advanced concept such as the tilt-rotor. Preliminary design work has been started on the LHX air vehicle as a conventional helicopter. In the Cost and Operational Effectiveness Analysis (COEA) the Army is examining the relative merit of both a scout/attack and a utility version of the tilt-rotor. Should this analysis show tilt-rotors to be the preferred alternative due to superior speed or other characteristics, the Army will relook the helicopter decision.

NEW PROTECTIVE MASK

Senator **Warner**. I understand that, despite several attempts to accelerate the fielding of a new protective mask, we are still running behind in this effort. It seems that we should be moving with more urgency on this matter. What is the current status and when will we begin fielding the new mask?

General **Wickham**. The development and fielding of the new mask continues to be the Army's top NBC defense program. The test data results for the three candidates from the United States (two) and the United Kingdom (one) have been evaluated against the requirements and unfortunately we have found that none is yet fully satisfactory. We are now in the process of defining the improvements which must be made for each candidate prior to retesting. A follow-on operational test and revised development schedule are being developed. The FY86 and FY87 budget supports an acquisition strategy that calls for award of a procurement contract in late FY86. However, the Army does not expect to award the initial procurement contract until early FY87. The Army expects to begin equipping troops with the new mask in early FY88.

SINGLE CHANNEL GROUND AND AIRBORNE RADIO SYSTEM [SINCGARS]

Senator **Warner**. I am concerned by the latest reports I have read concerning the Army's SINCGARS program.

It appears that we are purchasing a radio that will not communicate in its anti-jam mode with our German allies, and that the performance of the radio is far below what was expected. A recent article mentions a letter from General Thompson, Commander of the Army Material Command, which indicates that the mean time between failure (MTBF) is running at 100 to 200 hours, as opposed to a contract specification of 1250 hours.

Further, I understand that this year's production was reduced from 16,000 units to 400. I have also been told by some experts in the communication field that, because of the random frequency-hopping of these radios, they may jam each other when operated in proximity or on high power.

These are not cheap radios. I understand they will cost about $14,000 apiece.

This program sounds like one that is in great shape except for cost, schedule and performance. I hope you can tell me that at least some of this is untrue.

General **Wickham**. Sir, I would like to respond to your concerns in the following manner:

Senator **Warner**. Does SINCGARS communicate in its anti-jam mode with our German allies?

General **Wickham**. No. However, SINCGARS is consistent with NATO requirements (STANAGS) for combat net radios. Currently, these STANAGS address only data transmission and cueing (the process whereby a non-frequency hopping radio signals a radio which is frequency hopping). There is no STANAG for Electronic countermeasures (ECCM), frequency hopping operations.

The NATO Nations examined the requirement for ECCM interoperability and concluded that:

a. Liaison detachments equipped with radios interoperable with their parent force will be a continuing requirement not likely to be supplanted by any foreseen technological developments.

b. Requirements for radio sets interoperating in a NATO ECCM mode did not seem very large in number when considering planned operations (tens rather than hundreds).

c. Some dangers were envisaged in having a NATO interoperable mode which, by electronic signature would identify the NATO links.

The United States has submitted a draft STANAG to NATO for ECCM combat net radios based on the SINCGARS ECCM technique. However, the Germans are not expected to ratify this STANAG in the near future because of ongoing national projects and studies.

The Germans are developing an ECCM applique which will be attached only to vehicle mounted radios and is not interoperable with SINCGARS in the ECCM mode, and the radios are interoperable in the non-ECCM mode. We are currently discussing alternatives with the Germans in order to achieve both near term and long term ECM interoperability with their forces.

Senator **Warner**. Is the performance of the radio far below what was expected?

General WICKHAM. During contractor initiated pre-production reliability acceptance testing a mean time between failure (MTBF) of 130 hours was achieved and the contractor, ITT, indicated they had identified "fixes" which should elevate the MTBF to approximately 400 hours, which is 32% of the contract requirement of 1250 hours MTBF. ITT and the Government continue to work to achieve the 1250 hours MTBF.

Senator WARNER. Was this year's production reduced from 16,000 units to 400 units?

General WICKHAM. No, not directly. The 16,000 radios to be procured as option 3 from the leader, ITT, was deferred from 86 to 87 because of the current reliability issues. The 400 radios for 86 represents the initial buy from the follower (2nd source) contractor. This procurement was accelerated based on the SAC congressional direction.

Senator. WARNER. Do these radios, because of the random frequency-hopping, jam each other when operated in proximity or on high power?

General WICKHAM. Extensive testing and computer simulations have been performed to assess SINCGARS co-site and mutual interference effects. The computer simulations indicate the SINCGARS when fully deployed will not degrade communications due to mutual interference (self-jamming). The computer simulation results are to be validated during the upcoming SINCGARS field testing (FOE). Regarding co-site interference, testing has demonstrated that two SINCGARS radios operating within four feet of each other can satisfactorily transmit and receive voice and data traffic over required distances.

Senator WARNER. Do these radios cost about $14,000 apiece?

General WICKHAM. The 31 December 1985 Selected Acquisition Report (SAR) shows the Program Acquisition Unit Cost (PAUC) which is total program cost (RDTE and procurement to include spares) for the ground and the airborne radio, divided by the total program quantity as:

$14.5K—constant fiscal 1984 dollars.

$19.0K—escalated dollars.

VALUE OF THE GI BILL

Senator WARNER. The current budget request from the administration includes no funding for the current GI bill and I understand the administration has proposed that the GI bill be repealed. What is your personal view of the value of the current GI bill in terms of: (a) Recruiting? (b) Recruiting soldiers for critical skills? (c) Retention?

Mr. MARSH. The new GI bill has had a positive effect on our recruiting efforts. Our preliminary data for the period July 1985 through March 1986, shows a 14.5% increase in quality contracts over the corresponding period the year before. In conjunction with the GI bill, the Active Army has used educational assistance incentives (Army College Fund) in recent years as a major attractor of quality accessions. Studies as late as the 1985 Rand study, "Enlistment Decisions of Young Men," strongly support the concept that educational assistance is a prime motivator for youth, especially quality youth to enlist in the military. We need to maintain our competitive edge, especially in light of the dwindling pool of potential recruits. The GI bill in conjunction with the Army College Fund has enabled us to access quality recruits and critical skill requirements to meet our needs in the Active Army. Likewise, our Reserve component is showing similar increases in quality recruiting. The retention effects are much harder to see and measure. The one major effect of the GI bill on retention is the conversion of Vietnam Era GI bill eligibles to the new GI bill on January 1, 1990. Career soldiers serving 3 years from July 1, 1985, are now eligible for conversion of old Vietnam Era GI bill (which would have expired Dec. 31, 1989) to the new GI bill. This will have the tendency to retain these midcareer and senior personnel rather than force them to make a decision to leave active duty to use their Vietnam Era GI bill educational benefits.

QUESTIONS SUBMITTED BY SENATOR CARL LEVIN

FISCAL YEAR 1987 AMMUNITION REQUEST

Senator LEVIN. Readiness and force sustainability have been major themes of the administration's defense budget; yet the fiscal year 1987 request for ammunition is much, much less than was requested in fiscal year 1986. For example, in your last year's request you requested 5.4 billion dollars for fiscal year 1990. This year you are requesting only 2.3 billion dollars. Our analysis indicates that you will have fewer days of ammunition supply in 1990 than you have today. Please explain the reason for the extreme swing in your ammunition requests and how this decision was made. Were the CINCs involved in the decision process? What were their recommendations?

General **Wickham**. Department of Defense must share in the effort to reduce Federal deficits. The changes which you cite for the fiscal year 1987 ammunition request reflect the Army leadership's decisions about how to operate and sustain the Army in this constrained fiscal environment, both for Procurement Ammunition, Army and for other Army appropriations. Trends indicated that the Army probably could not fully execute the large program projected for fiscal year 1990. Therefore, the Army leadership decided to bring out-year projections more in line with near-term funding levels that had a higher chance of execution. The CINCs stated requirements and priorities were considered in the reduction to these programs.

FORCE SUSTAINABILITY

Senator **Levin**. General Wickham, how many division forces can you sustain in combat before the Reserves have to be mobilized?

General **Wickham**. As a Nation, we must accept significant risk to our national security because of the constrained size and capabilities of our current and programmed Active Forces. The Army has maintained an Active end strength of 781,000 for several years. We have elected to do this in recognition of fiscal constraints and the essential need to protect our modernization program, which was initiated much later than the modernization efforts of the other services. Our mix of Active and Reserve divisions has been developed to gain the best deterrent capability from our Active Forces, while not relying inordinately on the early employment of Reserve combat forces should deterrence fail. The Army currently has sufficient active tactical support forces to support about five and one half divisions. These forces are spread throughout the Active Army. Thus, any multi-divisional commitment will require the call-up of some Reserve component forces. The number of Reserve component forces required will be dependent on the number of divisions committed, the theater in which the units are employed, and support from the host nation and the Logistics Civil Augmentation Program (LOGCAP).

Senator **Thurmond**. If there is nothing else, we stand adjourned.

[Whereupon, at 10:08 a.m., the committee adjourned, subject to the call of the Chair.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

WEDNESDAY, APRIL 16, 1986

U.S. SENATE,
COMMITTEE ON ARMED SERVICES,
Washington, DC.

NAVY-MARINE CORPS PROGRAMS

The committee met in open session, pursuant to notice, at 9:05 a.m., in room SR-325, Russell Senate Office Building, Senator Strom Thurmond presiding.

Present: Senators Thurmond, Warner, Humphrey, Cohen, Denton, Gramm, Stennis, Exon, Bingaman, and Dixon.

Staff present: James F. McGovern, staff director and chief counsel; Patrick A. Tucker, general counsel; Gerald D. Strickler, printing and documents clerk; John J. Hamre, George K. Johnson, Jr., David S. Lyles, Russell E. Milnes, Gordon G. Riggle, Mark B. Robinson, Carl M. Smith, Daniel J. Wildfong, professional staff members; Russell C. Miller, research assistant; and Kathleen L. McGuire, staff assistant.

Also present: Les Brownlee, assistant to Senator Warner; Dale F. Gerry, assistant to Senator Cohen; Allan W. Cameron, assistant to Senator Denton; Alan Ptak, assistant to Senator Gramm; Francis J. Sullivan, assistant to Senator Stennis, Jeffrey B. Subko, assistant to Senator Exon; John B. Keeley, assistant to Senator Levin; Thomas K. Longstreth, assistant to Senator Kennedy; Charles C. Smith, assistant to Senator Dixon; and Milton D. Beach, assistant to Senator Glenn.

OPENING STATEMENT BY SENATOR STROM THURMOND, PRESIDING

Senator THURMOND. The committee will come to order. The committee meets in open session today to receive testimony on the posture of the U.S. Navy and the U.S. Marine Corps.

I am pleased to welcome Hon. John F. Lehman, Secretary of the Navy; Admiral Busey, the Vice Chief of Naval Operations, and Gen. P.X. Kelley, the Commandant of the Marine Corps.

Although I am sure that all members of the committee would like to discuss the recent operations in Libya, that is not the purpose of today's hearing. Accordingly, I hope members will make every effort to limit their questions to the subject at hand. If there is sufficient interest in further briefings about the operations against Libya, we can make arrangements with the joint staff to provide such a briefing.

Secretary Lehman will be our first witness, and I would like to remind all the witnesses that your prepared remarks will be included in the record so you may summarize your oral remarks as briefly as you can to convey to us the thrust of your remarks.

The prepared statement of Senator Dixon will be inserted in the record at this point.

[The prepared statement of Senator Dixon follows:]

Prepared Statement by Senator Alan J. Dixon

Mr. Chairman, we are here today to receive testimony from the Honorable John Lehman, Secretary of the Navy, and General P.X. Kelley, Commandant, U.S. Marine Corps, on the views and posture of the Navy and Marine Corps prior to our committee's consideration of the fiscal year 1987 Defense authorization bill.

I first want to congratulate Secretary Lehman on the outstanding way the Navy has performed during the last few weeks against Libya.

As the ranking member of the Preparedness Subcommittee I have been attending hearings on the readiness situation in each of the services. I feel we are going backward in the areas of ammunition supply and spare parts. Mr. Chairman, it is time that this committee look very carefully at buying new equipment if we don't have the spare parts to keep them running, nor the ammunition to keep them fighting.

Thank you, Mr. Chairman.

Senator **Thurmond**. Now, Secretary Lehman, we welcome you here. We want to commend you for the fine job you are doing as Secretary of the Navy, and the initiative you have shown and the imagination you have exhibited, and I believe you are the first witness so you may now proceed.

STATEMENT OF HON. JOHN F. LEHMAN, JR., SECRETARY OF THE NAVY

Secretary **Lehman**, Thank you, Mr. Chairman. It is a pleasure to be back for my sixth presentation of the Navy budget. As you will find in my prepared remarks, we are still proceeding on course with the plan that we laid out before you 5 years ago—a plan to rebuild the Navy and Marine Corps in its readiness, its personnel quality and its war fighting and deterrent capability. Again, you will find no changes in the overall Navy strategy to achieve maritime superiority.

The overall structure of the expansion to 600 ships, the 15 carrier battle groups, the 100 attack submarines the lift capability for one Marine Amphibious Force lift, plus one independently deliverable Marine Amphibious Brigade; all of those things remain the same. And the reason they do is because they are based on a straightforward logical deduction from the national strategy of what the Navy and Marine Corps have to do in wartime.

You will find in the presentation a summary of the management initiatives that have been the focus of a great deal of our attention within the Department of the Navy the past several years. They are bearing very dramatic results. We have demonstrated, as you know, that we can bring in cost underruns year after year; nearly $1½ billion each of the last 4 years in cost underruns in shipbuilding alone.

You will find that if you look at the average cost of Navy airplanes over the last 30 years there had been about a 10-percent increase per year until 1982. But now, as happened for the last 4 years, the price is coming down for all Navy airplanes.

The F-18, as an example, costs $4 million less this year than it cost in 1982. That has been brought about because of the fundamendal change in management philosophy that Cap Weinberger brought to the Defense Department, a philosophy which the Navy has applied with very strong dedication, raising competition from 25 percent to over 50 percent overall and in shipbuilding to over 85 percent. We have brought second sources into every single program where it is possible, keeping a discipline on our own tendency to overspecify and goldplate.

And as a result, even though Congress has cut some $70 billion out of our budget over the last 5 years, we are still on course. We still have the 600-ship Navy. All of the ships are either deployed or under construction. We have been able to increase readiness on every score by some 40 percent.

That is why recent actions in the Mediterranean over the past several months and in particular the past few days have demonstrated repeatedly, and under the most stressing conditions, that we have a fully ready force. It is completely manned with the highest quality of people we have ever had. It is equipped with every kind of high-tech system that is available. Weapon stocks are at 100 percent in each of the deployed ships. The spare parts lockers are filled with a 90-day supply of spare parts. And so, when called upon, the Navy has responded as have the other services with a flawless performance based on that investment that this committee has made in that recovery program.

In summary I believe that, the overall capability of our Navy and Marine Corps today is 100 percent better than it was 5 years ago. We have achieved that with only 6 percent real growth average for the last 5 years. From that, I think you can deduce, with confidence, that you will see the same multiplier effect in the opposite direction, if we have to live with no-growth budgets in the years ahead because the multiplier effect of cuts will be the same going downhill as the benefits were coming uphill.

In other words, if we have another year or several years of no-growth budgets, you will see a rapid return to the unreadiness of the 1970's, because we will lose our second sources. We will lose the ability to keep production rates at an efficient level. We will lose our quality personnel. And with these things reinforcing each other, we will lose what has been achieved in a very short period of time.

I urge the committee to keep that in mind as you consider budget levels and as you recommend to the Senate as a whole budget levels for this and for future years. We have a superb, high quality, military force today. It did not happen automatically. This committee was a major participant in bringing it about. But, it will not stay a quality force if the kinds of drastic cuts that some have urged are in fact enacted by Congress.

That completes my summary, Mr. Chairman.

Senator THURMOND. Thank you very much.

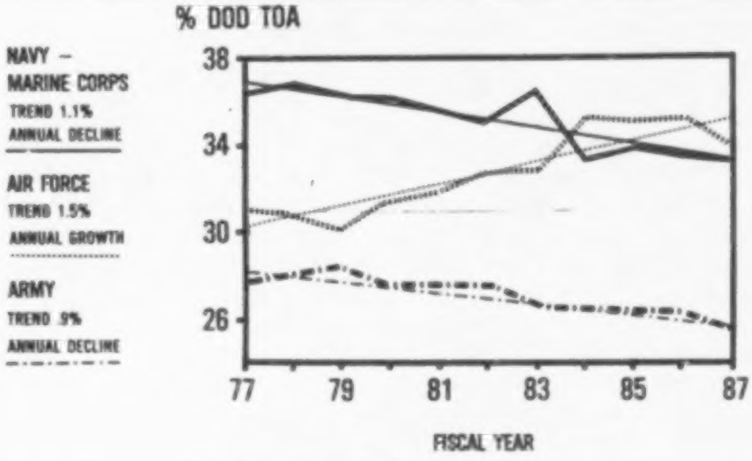
[The prepared statement of Secretary Lehman follows:]

A Report by the Honorable John F. Lehman, Jr., Secretary of the Navy, to the Senate Armed Services Committee on the Posture and Fiscal Year 1987 Budget of the U.S. Navy and Marine Corps

Mr. Chairman, I welcome this opportunity to appear for the sixth time to offer my assessment of the current posture of the Navy/Marine Corps team and to present the Department of the Navy budget request for Fiscal Year 1987.

Since my first report to you five years ago, President Reagan's Naval Recovery Program has more than doubled our overall naval capability. By cancelling plans for early retirement of two carriers and some thirty destroyers and amphibious ships, and by doubling the rate of new ship construction and reactivating battleships, our Navy has grown from 479 to 547 ships, with another 84 under construction; our Ready Reserve--including strategic sealift--has grown from 32 to 85 merchant ships; the measured readiness of our ships and squadrons has increased nearly 40 percent, and our ammunition stocks have nearly doubled. All this has been achieved with an average real growth in in the DON budget of only 5.6 percent from FY-82-86. The Navy Department share of the Defense budget has declined an average 1.1 percent during this same period.

DEFENSE BUDGET SHARE
BY SERVICE



TOA = TOTAL OBLIGATIONAL AUTHORITY

THE 600-SHIP NAVY: WHY DO WE NEED IT? HOW CAN WE AFFORD IT?

Now that the President's program is well established, it is timely to reexamine its premises as we plan for the next five years. Media-anointed experts have raised questions about the size, character, and complexity of the Navy and Marine Corps: Do we really need so many ships? Are the Navy and Marine Corps effective in helping to deter Soviet aggression--across the full spectrum of violence, from terrorism to nuclear war? Do we have a strategy that guides the planning and training of our forces? Is it the correct strategy? If it is, what have we accomplished to date in ensuring we can carry it out, and are we building the right types and numbers of ships to execute it in the future? Finally, can this nation afford to sustain a 600-ship fleet--not only well-equipped but properly manned--for the long term? Now that Gramm-Rudman-Hollings has become law and retrenchment is the theme of the hour, the answers to these questions take on added significance.

Why 600 Ships?

To understand how we arrived at the size of our planned fleet of ships, we must begin by discarding the idea that this number has sprung, full blown, from the brow of some would-be Napoleon of the high seas. Since World War II, maritime force planners have found themselves at the mercy of three enduring elements:

Geography

Water covers three quarters of the world; and the United States is an "island continent" washed by the Atlantic and Pacific oceans.

Vital Interests of the United States

These are expressed in the web of more than 40 treaty relationships that bind us to mutual defense coalitions around the world. These relationships shape our national security requirements--together with the energy and commercial dependencies that support our economy in peace and in war.

The Soviet Threat

Whatever its original rationale, the Soviet Navy's postwar expansion has created an offense-oriented blue water force, a major element in the Soviet Union's global military reach that supports expanding Soviet influence from Nicaragua to Vietnam to Ethiopia. From the Baltic to the Caribbean to the South China Sea, our ships and men pass within yards of Soviet naval forces every day. But familiarity, in this case, is breeding a well-deserved respect; they are good and getting better.

The Navy's recently updated publication, Understanding Soviet Naval Developments, provides the facts about the Soviet Navy.

Every American should be aware, for example, that Soviet nuclear submarines operate continuously off our coasts. "Victor"-class nuclear attack submarines are routinely found lurking near many of our principal naval ports. Soviet surface units are now making regular deployments to the contentious and vulnerable chokepoints of the Caribbean Sea and Gulf of Mexico. Worldwide, we find the Soviet Navy astride the vital sea-lanes and navigational chokepoints, through which most of the Western world's international trade must pass. This is the new reality. The pattern of Soviet naval deployments has revealed itself only over the last several years. These deployments constitute a post-World War II change in the global military balance of power that has been surpassed only by the advent of thermonuclear weapons. No planner, civilian or military, can ignore the growing dimensions of Soviet maritime power.

The past year alone has provided cause enough for alarm. In mid-1985 naval forces from the Soviet Northern and Baltic fleets conducted a major open-ocean exercise in the North Atlantic, Norwegian and North Seas. Nearly three-quarters of all combatant ships and submarines from these fleets were deployed. The exercise involved submarine, surface ship and aircraft strikes on Soviet surface combatants simulating NATO battle groups moving into the Norwegian Sea. The exercise included the most modern Soviet major surface combatants, such as the aircraft carrier KIEV and the nuclear-powered battle cruiser KIROV. Soviet anti-carrier strike, reconnaissance and anti-submarine aircraft flew around the clock. The exercise was similar in activity level and realism to an unprecedented Soviet Pacific fleet exercise conducted in April which centered around KIEV's sister ship, NOVOROSSIYSK.

Two other significant events marked the Soviet naval calendar in 1985: In the first, Fleet Admiral of the Soviet Union Sergei G. Gorshkov, a flag officer since 1941 and leader of the Soviet Navy since 1956, stepped down, to be replaced by nuclear submariner Vladimir N. Chernavin. Chernavin is known to be more of a "team player" than Gorshkov and has advocated closer cooperation with Soviet land forces in his published writings. On other matters, however, he is not likely to change the pull or direction of the growth in capability of the Red Fleet established over three decades by his illustrious predecessor.

The other major development in Soviet seapower was the launching of the 65,000-ton nuclear-powered aircraft carrier and, we believe, the immediate laying of the keel for a second unit of the class. These ships--and--the enormous TYPHOON-Class ballistic missile submarines--may be said to mark the culmination of Admiral Gorshkov's long career. For the first time Soviet carrier battle groups will be able to provide visible and truly potent seaborne presence wherever Soviet "state interests" dictate. Along with such units as the KIROV-Class nuclear-powered battle cruisers--the third of which is now under construction--the Soviet carriers will be able to bring fixed-wing strike aviation and local air-superiority to bear in support of Soviet offensive fleet operations, and in support of clients and proteges, such as Nicaragua, Libya, Vietnam and Angola. Just as important, these carriers will bring the enormous benefit of air cover to the Soviet surface fleet permitting them a new dimension of survivability and flexibility.

What is particularly disturbing about the "fleet that Gorshkov built" is that improvements in its individual unit capabilities have taken place across broad areas. Submarines are faster, quieter,and have better sensors and self-protection. Surface ships carry new generations of missiles and radars. Aircraft have greater endurance and payloads. And the people who operate this Soviet concept of a balanced fleet are ever better trained and confident.

Two operational trends are significant. First, the Soviet Pacific Ocean Fleet continues to be built up in size and--more importantly--capability. 1985 saw the transfer to the Pacific of the second KIROV-Class battle cruiser and its first examples of the SOVREMENNYY and UDALOY guided missile destroyers; that fleet already had two of the three completed KIEV-Class V/STOL carriers. The second trend is toward greater security for the ballistic missile submarine force, which the Soviet Navy considers a prime responsibility. Increasingly, that force is concentrated in the waters of the Arctic, protected by layers of surface, submarine and air forces as well as by the ice cap.

What determines the size of the Navy?

Geography, alliances, and the Soviet threat combine to dictate the actual numbers of ships--the "size of the Navy"--required to fulfill our commitments in each of our maritime theaters. Before reviewing in detail the forces we need in each theater, some observations are in order:

Any view of the global disposition of the U.S. Navy and Marine Corps reveals that we often deploy in peacetime very much in the same manner as we would operate in wartime. For purposes of deterrence, crisis management, and diplomacy, we must be present in the areas where we would have to fight if war broke out. Of course, the operational tempo is different--a roughly three-to-one ratio in wartime, as compared with peacetime.

We also train as we intend to fight. A full-scale general war at sea would rarely find a carrier battle group operating alone. So we train often in multiple carrier battle forces.

Allied Navies

Our maritime security depends on significant assistance from allies in executing our missions. Fortunately, we count among our friends all of the world's great navies, save one. Clearly, in areas such as diesel submarines, frigates, coastal patrol craft, minesweepers, and maritime patrol aircraft, allies of the United States have assets absolutely essential for sea control in war and peace. In some regions, such as the Eastern Atlantic and the waters surrounding the United Kingdom, our allies supply a majority of the antisubmarine capability to counter the Soviet threat. In fact, if we could not count on our allies, we would require a U.S. fleet much larger than 600 ships to deal with the 1,700 ships and submarines that the Soviets can deploy against us. But the world's greatest navies are on our side, and this gives a tremendous advantage to the U.S. Navy and a significant cost savings to the U.S. taxpayer.

Shifting Trade Dependency

America's increasing commercial and energy interdependence with Asia, and the growth of the Soviet Pacific Fleet--now the largest of the four Soviet fleets--have negated the so-called "swing strategy" of the Fifties, Sixties, and Seventies, which planned to reinforce the Atlantic Fleet with combatants from the Pacific in time of crisis. Today, the United States has an Asian orientation at least equal to its historic engagement in Europe. Existing treaty relationships in the Pacific have been augmented by growing commercial connections. For example, in 1980, the value of U.S. trade with the Pacific rim nations was roughly equal to trade with the country's Atlantic partners. Four years later, Pacific trade exceeded that with Western Europe by $26 billion.

Shifting Oil Dependency

Similarly, oil dependencies have shifted tremendously in the last five years. This forces America to reconsider the priorities of naval deployments in the Northern Pacific and Caribbean regions. The reorientation of U.S. sources for crude oil--on a hemispheric axis--is a long-term geopolitical reality that has gone largely unnoticed. Western dependency on Middle Eastern oil is still debated at length as to its impact on our military thinking and force planning. But we must also take into account that, in 1985, the United States imported eight times as much oil by sea from the Western Hemisphere as it received from the entire Middle East. Oil from Mexico has increased to almost one-fourth of our imports, while oil from Saudi Arabia has dropped to less than 5 percent of the U.S. import market. We no longer depend primarily on the Middle East and Persian Gulf supply for our vital energy needs. Instead, the locus of our oil trade is in the Western Hemisphere: Alaska, Canada, Mexico, Venezuela, and the Caribbean area.

With these observations as background, let us review our forces in the main geographic areas: the Atlantic, the Mediterranean, the Pacific, and Indian Ocean-Persian Gulf.

The Atlantic

The large Atlantic theater encompasses the North Atlantic, the Norwegian Sea, the Northern Flank of NATO including the Baltic throat, the South Atlantic, the Caribbean, and the Gulf of Mexico. It includes the coasts of South America and the west coast of Africa, all vital sea-lanes of communications. And it involves the Mediterranean and the Middle East. The U.S. Navy operates in the Atlantic theater with two fleets, the Sixth and the Second.

The Sixth Fleet in the Mediterranean is the principal fighting force of the NATO Southern Europe Command and provides strike, amphibious, anti-air superiority, antisubmarine, and close air support for the entire Southern Flank of NATO--a principal makeweight in the balance in the Central Front.

In addition, the Sixth Fleet is the principal naval force that supports our friends and allies in the Middle East. The threat there is significant. The Soviets maintain a fleet in the Black Sea and a deployed squadron in the Mediterranean. In wartime, we expect to see there also Soviet naval strike aircraft, a formidable number of diesel and nuclear submarines, and a full range of missile cruisers, destroyers, and other smaller combatants.

To deal with this threat, as we do in all our planning, we start with a base of allied forces in the areas under consideration. The navies of our allies are good. For example, we count on them to provide about 140 diesel submarines, which are effective for coastal and area defense, for establishing and maintaining barriers, and for certain other useful missions.

In wartime, U.S. forces in the Sixth Fleet would have to include three or four carrier battle groups, operating to meet NATO commitments. We would also need to deploy a battleship surface action group and two underway replenishment groups. In peacetime, we average over the year one and one-third carrier battle groups deployed in the Mediterranean.

The Second Fleet. This is the heart of the Atlantic strike fleet for NATO. It is responsible for naval operations in the North Atlantic, the Eastern Atlantic, Iceland, the Norwegian Sea, the defense of Norway, and the entire Northern Flank including the North Sea and Baltic throat. It must simultaneously accomplish any naval missions required in the Caribbean, where we now face a very large Soviet and Cuban naval presence; in the South Atlantic, where we have vital sea-lanes; and along the West African sea-lanes, where the Soviets now deploy naval forces continuously.

For the Second Fleet, in wartime, we must plan to have four or five carrier battle groups, one battleship surface action group, and three underway replenishment groups. Each carrier brings the equivalent firepower of 40 World War II carriers and can deliver accurate strike ordnance on target equal to 800 B-17s every day. In peacetime, we generally run higher than this, because most of our principal training occurs in the Second Fleet's operating areas. Today, we have six carrier battle groups cycling in the Second Fleet.

The Pacific

Clearly, our increasing commercial interests and historic security ties in the Pacific impact on our naval planning for the area. If we are to protect our vital interests, we must have forces available to deploy--not only to the Atlantic theaters and the Sixth and the Second fleets--but also to the Pacific simultaneously, to the Seventh and the Third Fleets and the Middle East Force of the Central Command. We cannot abandon one theater in order to deal with the other. The great paradox of the 1970s was the reduction of the fleet's size so that it could only be employed in a "swing strategy"--just as that strategy was being rendered obsolete by trade, geopolitics, and the growth of the Soviet Navy.

The Seventh Fleet is our forward Western Pacific fleet, which meets our commitments to Japan, Korea, the Philippines, Australia, New Zealand, and Thailand, and in the critical straits of Southeast Asia, as well as the Indian Ocean. In wartime, we would need to deploy five carrier battle groups to the Seventh Fleet, two battleship surface action groups, and four underway replenishment groups. In peacetime, we average over the year the equivalent of one and one-third carrier battle groups in the Western Pacific.

We do not have a separate fleet in the critical area of Southwest Asia, the Indian Ocean and the Persian Gulf, although some have proposed the re-creation of the Fifth Fleet for that purpose. In peacetime, we have the Middle East Force of the Central Command and elements of the Seventh Fleet, normally a carrier battle group.

In wartime, we plan for two of the Seventh Fleet carrier battle groups to meet our commitments in the Indian Ocean, Southwest Asia, East Africa, the Persian Gulf area, and Southeast Asia. Notionally, a Seventh Fleet battleship surface action group and one underway replenishment group would also be assigned to operate in these areas.

The Third Fleet has responsibility for operations off Alaska, the Bering Sea, the Aleutians, the Eastern Pacific, and the Mid-Pacific region. In wartime, there would be considerable overlapping and trading back and forth between the Seventh and Third Fleets. This happened in the Pacific during World War II. To cover that vast area, we must assign two carrier battle groups and one underway replenishment group. (See illustration next page.)

OPTEMPO in Peace and War

These requirements compel us to deploy a 600-ship Navy. In peacetime, we deploy to the same places we must control in war, but at one-third the tempo of operations. This allows a bearable peacetime burden of six-month deployment lengths and 50% time in homeport. Looked at either way, we require the same size fleet to meet peacetime deployments as we do to fight a global war. Taken together, they add up to the following

CURRENT NAVY FORCE REQUIREMENTS

	PEACETIME MARITIME STRATEGY	WARTIME MARITIME STRATEGY
	SIXTH FLEET	
CVBG	1.3	4
BBSAG	.3	1
URG	1	2
	SECOND FLEET *	
CVBG	6.7	4
BBSAG	1.7	1
URG	4	3
	SEVENTH FLEET * *	
CVBG	2	5
BBSAG	.5	2
URG	1	4
	THIRD FLEET *	
CVBG	5	2
BBSAG	1.5	-
URG	4	1

* INCLUDES FORCES IN OVERHAUL * * INCLUDES INDIAN OCEAN FORCES

CVBG=CARRIER BATTLE GROUP; BBSAG=BATTLESHIP SURFACE ACTION GROUP; URG=UNDERWAY REPLENISHMENT GROUP

-Fifteen carrier battle groups

-Four battleship surface action groups

-One-hundred attack submarines

-Lift for the assault echelons of a Marine Amphibious Force and a Marine Amphibious Brigade

-An adequate number of ballistic missile submarines

When escort, mine warfare, auxiliary, and replenishment units are considered, about 600 ships emerge from this accounting--a force that can be described as prudent, reflecting geographic realities, alliance commitments and dependencies, and the Soviet fleet that threatens them. Unless Congress reduces our commitments or the Soviet threat weakens, there is no way to reduce the required size of the U.S. fleet and still carry out the missions assigned to the Navy.

Does the Navy have a role in the national strategy?

While the Carter administration questioned whether the Navy could influence a "short war" in Central Europe, such a proposition is indefensible today. The coalition of free nations bound together in NATO must have maritime superiority as a prerequisite for any defense strategy. Maritime superiority alone may not assure victory, but the loss of it will certainly assure defeat--and sooner rather than later. The chronicles of warfare from the classical era forward are a consistent testament to the influence of sea power upon history, in which great continental powers do not long prevail against an opponent with mastery of the seas. Today, continental defense in NATO rests on early achievement of maritime superiority. The Soviet Union, as evidenced by its ongoing naval expansion, understands the experience of history far better than our trendier military academics. It is not accidental that the free world alliance is named "North Atlantic" while its totalitarian adversary takes its name from a land-locked city.

Does the Navy have a strategy?

Consider the charge leveled by some parlor room Pershings that our current naval buildup lacks an underlying strategy.

Not since the days of Theodore Roosevelt have the Navy and Marine Corps exhibited such a strong consensus on the comprehensive strategy which now forms our naval planning. Briefly stated, our strategic objectives are the following:

-To prevent the seas from becoming a hostile medium of attack against the United States and its allies

-To ensure that we have unimpeded use of our ocean lifelines to our allies, our forward-deployed forces, our energy and mineral resources, and our trading partners

-To be able to project force in support of national security objectives and to support combat ashore, should deterrence fail.

To achieve these objectives, we need a maritime strategy at once global, forward deployed, and--with our allies--superior to our probable opponents. Global, because our interests, allies, and opponents are global; forward deployed, because to protect those interests and allies, and to deter those opponents, we must be where they are; superior, because if deterrence fails to prevent a conventional war at sea, it is better to win than to lose.

Does the Navy have the correct strategy?

Today's debates would benefit from a more precise understanding of the role of strategy. Strategy is not a formula for fighting each ship and deploying each tank in the battles that may take place around the world. That is not the function of the military establishment inside the Washington Beltway. Such is the proper function only of the theater commander who is given the responsibility to carry out the defense objectives set by the national command authorities.

Beyond the central concept of global, forward-deployed, and superior naval forces, strategy's role is to give coherence and direction to the process of allocating money among competing types of ships and aircraft and different accounts for spare parts, missile systems, defense planning, and the training of forces. It provides guidelines to aid us in allocating both resources and shortages.

Title 10 of the U.S. Code charges the Secretary of the Navy with ensuring the highest level of training appropriate to the responsibilities placed upon both the Marine Corps and the Navy. That is what strategy provides to us--a framework within which to train. One will search in vain, however, for a Navy cookbook that tells on-scene commanders when to move aircraft carriers, or how or where to move attack submarines or Aegis cruisers at any given point after a conflict commences. There should never be any such cookbook and certainly it should never come from Washington. Those who criticize our strategy for being the wrong cookbook or for not having a cookbook do not understand strategy.

Other critics argue that our Navy should be less global, less forward-deployed, or less superior, with the resources saved to be poured into a stronger continental defense. To be less global means to abandon some area of our vital interests. To believe that in the case of the Northern Flank of NATO, for example, a "passive" defense line thrown across the Greenland-Iceland-United Kingdom Gap will somehow protect our sea-lanes or defer an engagement with Soviet forces demonstrates a lack of understanding of the fundamental mechanics of war at sea and the workings of NATO and the Soviets' own operational requirements. No coalition of free nations can survive a strategy which begins by sacrificing its more exposed allies to a dubious military expediency. To suggest that naval support of Norway or Turkey or Japan is too dangerous because it must be done close to the Soviet Union is defeatist. To suggest that such a strategy is provocative of the Soviets just indicates the lengths to which some critics will go, in order to portray Soviet intentions as solely defensive.

As for strengthening our continental defenses, we and our allies are also doing just that. To discard maritime superiority in an attempt to match the larger Soviet ground forces, however, would give us neither conventional deterrence on land nor secure access by sea unless the Western democracies are prepared to militarize their societies to an unprecedented, and unwise degree.

Training to the Strategy

The global maritime strategy has been continuously refined and applied to training. That training, like the strategy, is designed to incorporate not only Navy and Marine Corps forces, but is critically dependent on those of our sister services and the forces of our allies. By eliminating needless overlap in total capabilities, we believe our program will leave no vital maritime tasks uncovered. The past five years have seen major new agreements between the Navy/Marine Corps and the Air Force, the Army, and the Coast Guard. In addition, we have made extensive progress in multi-lateral and bi-lateral agreements with allied navies and air forces.

The fact that U. S. Air Force AWACS, B-52 bombers, and fighters are now an integral part of every significant naval exercise and theater strategy attests to the fact that while inter-service rivalry is strong on the playing fields of service academies, it does not interfere with the effective integration of our operating forces.

Our maritime strategy is continually tested, refined, and updated through several important processes. The Navy and Marine Corps senior operational commanders review it individually and as a group . It is examined, challenged, probed, and refined at the international level by senior American and allied military and civilian officials. We test it repeatedly in war games and simulations, especially the annual global war games at the Naval War College in Newport, RI. It is used as the planning base for our major exercises--Navy, joint, and multi-national--and the exercises themselves become the crucible for testing its refinement and challenging its assumptions. Every exercise provides useful lessons learned, to be fed back into the planning process.

In addition, Lessons Learned from every real-world crisis or conflict are applied immediately and integrated into our strategy. The Falkland Islands War, our own and Israeli operations in Lebanon, the Grenada intervention, and our constant monitoring of Soviet exercises and deployments are all examples. Much of our budget request each year has been modified since the previous year by the lessons learned from intervening events as applied to our overall strategy. In December 1983, as a result of lessons learned from the Falklands, we accelerated installation of the PHALANX close-in weapons system on ships serving in the dangerous waters of the Middle East. As a result of Grenada operations' analysis, we have modified communications equipment to improve interoperability in the future with U. S. Army ground forces.

Also, in response to urgent requirements in Lebanon in 1983, the Navy purchased MASTIFF mini-RPVs (Remotely Piloted Vehicles) from Israel. Last year we competed a contract for a short-range Navy-Marine Corps RPV which was won a few weeks ago by AAI, a Baltimore firm representing the Israeli firm, Mazlat. Deliveries will start to the Marines in September. We also awarded a contract last month for 500 Samson decoys, designed to imitate strike aircraft. These are advanced versions of the decoys used so successfully by the Israelis in the Bekaa Valley in 1982. The contractor will later train and qualify a second source.

Exercises and Operations

The highlights of our training and exercise program were the two big multi-battle group exercises conducted with our sister services and allies in the Northwest Pacific and Northeast Atlantic--FLEETEX 85 and OCEAN SAFARI 85. FLEETEX was the largest U.S. fleet exercise held in peacetime since World War II. OCEAN SAFARI was the largest NATO maritime exercise ever held. In OCEAN SAFARI, the "Safari" assembled off the East Coast of the United States and fought its way across the Atlantic, moved north of England and east of Iceland, and ended up in the Norwegian Sea. Approximately 160 ships and 280 fixed-wing aircraft and helicopters operated for four weeks in this environment against 19 real Soviet ships and submarines and 96 Soviet aircraft sorties. Ten NATO allies furnished forces.

Other deployments and exercises have focused on other dimensions of the strategy. We operated in the Baltic and Black Seas. UNITAS XXVI honed our skills and those of our South American allies in the waters of the South Atlantic and Southeast Pacific. The West African Training Cruise performed similar functions along the vital Southeast Atlantic SLOCs. Ships of the Navy's Military Sealift Command recently took part in REFORGER 86, transporting more than 3,000 pieces of equipment from the United States to Germany. On the West Coast, reservists from the Navy, Marine Corps, and Army loaded hundreds of tons of simulated ordnance onto a merchant ship under the supervision of Coast Guard Reserve Marine Safety inspectors in MAT MOBEX 86. Dozens of similar but much smaller operations and exercises occurred throughout the year.

The maritime strategy embraces more than preparation for global operations against the Soviets, of course. It uses naval forces to deter war and--should this fail--to use force where necessary throughout the warfare spectrum. In 1985, the highlight of our peacetime and crisis operations was the contribution the Navy made toward resolution of the ACHILLE LAURO piracy when four Navy F-14s from USS SARATOGA (CV 60) intercepted and escorted an Egyptian airliner carrying the pirates to the NATO base in Sigonella, Sicily. Said Secretary of Defense Weinberger: "The work of the Navy planes--the carrier and the F-14s--cannot be commended too highly because it is a difficult task on such very short notice to both assemble the force and make an intercept in international commercial aviation routes."

In a further response to international terrorism, in January we moved the SARATOGA battle group from the Indian Ocean to the Mediterranean as a response to Libyan terrorist support and provocations, demonstrating once again the utility and flexibility of mobile naval power.

OPTEMPO

Last year at this time I told you that it had been one of my great disappointments that despite adding some 50 ships to our operational fleet by then, we had been unable to make an appreciable reduction in OPTEMPO and the excessive time that naval personnel must spend away from their families. Family separation remains the number one reason why young officers and enlisted men and women choose to leave the Navy. I told you last year that making improvements in this area was a top goal of the next four years.

I am pleased to report this year that we are well on the road to improvement in this vital area. Cuts in deployment schedules have been ordered to eliminate excessive at-sea periods for ships and aircraft squadrons. Sailors are beginning to see changes now. Battle groups will spend a maximum of six months at sea and sailors will be assured they will be in home port at least 50 percent of the time. There will be major deployment turnaround ratios of 2:1 or better, which really means if you're deployed for six months, you're home for 12.

Two ways in which we plan to decrease the number of ships and people on extended deployments are by selectively alternating battleships with carriers and decreasing the size of battle groups.

Strategic Homeporting

In the 1970s the Navy budget was cut 22 percent, adjusted for inflation. The fleet shrank from 950 to 479 ships and many naval bases were closed by necessity. Drastic shortages of funds forced a consolidation that brought military vulnerability. Today we have 129 ships based in the Norfolk area, 105 in San Diego, and 68 in Charleston. President Reagan's expansion adds 120 ships to our fleet, and it is necessary to homeport them in the least vulnerable, most affordable way. A major initiative derived from our strategy has been our effort to decrease the vulnerability of our fleet and our vital merchant ports through an expanded Strategic Homeporting program. We are currently executing four major homeporting initiatives. We are homeporting a battleship surface action group in Staten Island, New York; a carrier battle group in Everett, Washington; a battleship surface action group, carrier battle group, and other vessels in Corpus Christi, Pascagoula, Lake Charles, New Orleans, Mobile, and Pensacola; and an expanded battleship surface action group in San Francisco, Long Beach, and Pearl Harbor. We have done this through competition and working with the local communities to find the lowest possible cost solutions.

A valuable dividend from these initiatives will be the large expansion of our private enterprise industrial support base. The Navy will derive great savings from the increased competition and much healthier mobilization potential from spreading the work in maintenance repair and support services. Dispersal of forces to more ports and to less concentrated ports improves our defensive posture, complicates enemy conventional mine and cruise missile warfare targeting, and minimizes the risks associated with a relatively simple but properly placed attack from the Soviet non-strategic submarines that now patrol our coasts. Homeporting in more diverse geographical locations on each coast provides us an opportunity to train and operate in a variety of environments, with less wasted transit time. Homeporting in Puget Sound and New York provides permanent naval capabilities to the Northeast and Northwest sealanes and ports. Dispersed homeports in the Gulf provide the same presence to the sealanes through which must pass most of NATO's vital reinforcement shipping, now heavily targeted by the Soviet and Cuban Navies. This new capability in the Gulf will greatly enhance our responsiveness in Caribbean contingencies.

Security

The best strategy, tactics, and equipment will count for little in a war with the Soviets if their key ingredients are compromised through espionage, theft, or treason. At sea and ashore we employ operations security, emission control, and other specialized methods to counter Soviet intelligence. But the Walker espionage case revealed dramatic shortcomings in Navy security. As a result of that case, we have moved immediately to make corrections. We have now reduced the number of personnel with access to classified information by 42 percent. We have withdrawn almost 200,000 clearances and lowered a further 130,000. As a precautionary measure, we have replaced about half the officers and senior enlisted personnel who maintain classified communications manuals. We have stepped up our physical security posture across the board, including improving our small arms training, beefing up our waterfront and shipboard security, and establishing anti-terrorism training and weaponry improvement programs. In August of last year, the Naval Investigative Service Command (NAVINSERVCOM) was reorganized with extended powers over its predecessor, the Naval Investigative Service, to enhance security, counterintelligence, and criminal investigations within the Department of the Navy.

What has been accomplished during the past five years?

Personnel

The past five years have seen the most dramatic change in the manning of the Navy and Marine Corps in the 210 years of our history. From the worst retention and recruiting in postwar history in 1979 and 1980, we have risen to the highest figures achieved since we began keeping records. We are meeting 100 percent of our recruiting goals, and have achieved 97 percent non-prior-service high school diploma graduates in the Marine Corps and 89 percent in the Navy. In virtually every category we have increased retention to near-record highs: in skilled enlisted ratings, in pilots and naval flight officers, in nuclear-trained and surface warfare officers. From a situation five years ago when some of our ships could not deploy on schedule because the fleet was manned at only 91 percent, we are now at 100 percent ship manning for a Navy that has grown by more than 65 ships.

The reorganization of the Naval Reserve to a "horizontal integration" with the active force has had the effect of shifting a substantial portion of our force structure manning to the Ready Reserve. In FY 1987, 43 ships will be manned by Selected Reserves, in addition to the augmentation of essentially all naval units by Selected Reserves upon mobilization. The 15th active carrier air wing has been deleted from the program and the 15th carrier will carry a Reserve Air Wing. This increased dependence on the use of the Ready Reserve has enabled us to greatly reduce our original estimates of required active end-strength growth.

Aviation Safety

A very significant indicator of the greater proficiency of our personnel is the aircraft accident rate. This past year, 1985, was the safest year for combined (Class A, B, and C) mishaps in naval aviation history. For the second year in a row, we had less than 4 mishaps per hundred thousand flight hours. The number of aircraft destroyed last year was also the lowest in history. That has brought about dollar savings in uncrashed aircraft in 1985 alone of nearly $235 million and the avoidance of much human tragedy.

Families

The Department of the Navy is continuing its efforts to improve readiness and retention through support of its military and civilian families. We are at the forefront in our emphasis on family support through Navy and Marine Corps Family Service Centers, day care centers, and the Spouse Employment Assistance Program.

Readiness

The fleet is more ready to go in harm's way than at any time in recent peacetime history. In the past five years, overall combat readiness for surface ships has improved by 94 percent, for nuclear attack submarines by 69 percent and aviation squadrons by over 200 percent.

The net increase in spare parts and ammunition has been far greater than the actual increase in funding applied to it. The reason has been the dramatic reforms in the way we have managed these funds. Despite the misinformation provided by self-appointed experts on defense procurement, the Navy initiated a major reform of its spare parts buying under the direction of the Secretary of Defense. Nearly all of the horror stories appearing in the press were the result of a vigorous pursuit of abuse by Navy personnel at all levels. We have been able, for instance, to raise competition in our purchase of aviation spares from a deplorable low of 6.9 percent in 1982 to the current level of 31.9 percent and climbing to an FY 1986 goal of 40%. As a result, the increase of end items to the fleet is substantially more than the increase of funding would suggest.

Sea-based Nuclear Deterrent

The modernization of our sea-based leg of the strategic deterrent is proceeding well. We have added seven OHIO-Class TRIDENT SSBNs to the fleet since 1981, with six others authorized. The latest addition to the fleet was ALASKA (SSBN 732) commissioned in January 1986. During sea trials, TRIDENT submarines have met or exceeded all of their design specifications.

The first eight OHIO-Class TRIDENT SSBNs are outfitting with the TRIDENT I (C-4) missile, joining 12 POSEIDON SSBNs equipped with TRIDENT 1. Over the past five years the development schedule of the TRIDENT II (D-5) was begun and deployment accelerated, with an initial operational capability (IOC) of 1989. In addition, we have greatly strengthened command and control of our strategic forces, including construction of the Extremely Low Frequency (ELF) communications system, and have begun to procure a follow-on TACAMO command and control aircraft. Two years ago we began deploying TOMAHAWK sea-launched cruise missiles equipped with nuclear warheads for theater nuclear deterrence. They are now operationally capable on attack submarines, cruisers, destroyers, and reactivated battleships. This highly reliable, accurate, low cost weapons system is a tremendous force multiplier that adds a new and very stabilizing dimension to our deterrent posture, and matches a capability inherent in the Soviet fleet since the early 1960s.

Shipbuilding

Five years ago the President set a goal of doubling the naval shipbuilding program. We have maintained that ambitious goal despite continuing cuts from the original budget estimates. We have brought dramatic new efficiency, discipline, and cost savings to the management of Navy shipbuilding.

From the 479 battle force ships in the fleet when President Reagan took office, the fleet has grown to 547 ships today and 553 by the end of FY 1986, reaching 600 by the end of 1989. In 1985 we delivered 19 new battle force ships, including two TICONDEROGA-Class AEGIS cruisers and three LOS ANGELES-Class attack submarines. Also, two Maritime Pre-positioning Ship squadrons became operational in the Atlantic and Indian Oceans, with a third scheduled to be positioned in the Western Pacific in the Fall of 1986. There are currently 84 naval ships now under construction, conversion or reactivation, at 17 different yards through the United States.

By canceling the Carter Administration plans to retire early the aircraft carriers MIDWAY (CV 41) and CORAL SEA (CV 43), and the DDG 2 and DDG 37 Class destroyers, and by reactivating the battleships, we have been able to expand the fleet rapidly over the past five years without sacrificing investment in new construction for the 1990s and the next century. An added benefit of this approach has been a major influx of new business and employment in the shipyards doing conversion, reactivation, overhaul, and ship repair. Because of the major emphasis on readiness maintenance spending, we have been able to reduce the backlog of ships awaiting overhaul from 16 in 1981 to zero today even as we have increased the fleet by more than 66 ships.

A substantial benefit to the economy and to deficit reduction has been the immediate creation of very substantial numbers of jobs in a declining shipbuilding and repair industry. The Navy shipbuilding and repair programs now account for over 85 percent of all employment in that industry in the national shipyard mobilization base. On the larger impact of Navy shipbuilding, it has been estimated that every billion dollars in the Navy shipbuilding program creates 26,000 direct jobs and 12,000 secondary jobs.

Aircraft

In each of the eight years preceding the Reagan rearmament program, the Department of the Navy was not able to procure enough aircraft to replace those lost through peacetime attrition. In each of the past five years, however, naval aircraft procurement has been nearly doubled from the average levels of the preceding four, and procurement of aircraft spares has more than tripled. These high rates of procurement have been maintained because of an historic reversal of cost trends in naval aircraft programs. For the fourth straight year, all naval aircraft procurement programs are on a firm-fixed-price contract basis, precluding the possibility of production cost overruns, and the annual prices of our new tactical aircraft have actually been coming down. Competitive pressures have been maintained by keeping four separate fighter and attack aircraft in production. In addition, we have been able to maintain stable production rates through most of our aircraft lines.

In 1985 we deployed two of our newest weapon systems, the F/A-18 HORNET and the LAMPS MK-III with the SH-60B SEAHAWK helicopter, for the first time, as part of the USS CONSTELLATION (CV 64) battle group. Also, in 1985, we received the twelve F-21A KFIR fighters we have leased from Israel providing us with uniquely realistic adversary aircraft against which our aviators can train.

As part of the Reagan Administration emphasis on the Ready Reserve, new reserve units have been established and our reserve pilots are flying front line Navy aircraft. Some of these flying units are augmentation units to fill out fleet squadron strength upon mobilization, and others are commissioned squadrons.

Weapons and Ammunition

In the decade preceding the Reagan Administration, the Marine Corps was unable to procure sufficient ammunition to replace the stocks expended in normal peacetime training. As a result, sustainability and war reserves disappeared. During that same period, the Navy was held to such low levels of procurement of ammunition, missiles, and torpedoes that four years ago we did not have sufficient stocks to load out the reduced fleet of 479 ships--even once--with full magazines. We had less than a week's supply of the most important air defense munitions. Such enormous shortages created over a decade of unilateral disarmament in the 1970s are not going to disappear overnight. But five years of sustained growth in our ammunition accounts has now begun to refill our munitions stockpiles.

From FY 1981 to FY 1986, actual in-bin munition levels for Navy and Marine Corps major weapons (e.g. missiles and torpedoes) increased by 77 percent. (From FY 1986 to FY 1988, when current contracts will be delivered, these levels will increase by another 170 percent.) Despite the fact that there is a two to three year lag between funding and delivery, our overall ordnance stocks have grown between 20 and 60 percent larger than they were in 1981 and some will double by 1987.

Are we buying the "right" Navy for the maritime strategy?

Because research and development projects span decades, and ships take many years to build, the makeup of our fleet cannot change radically with each administration. Instead, the fleet evolves over time with policy and technology. The fleet today reflects the wisdom of the deck plates, the labs, and lessons learned from our exercises. The size and design of our ships and weapons reflect the inputs of sailors in daily contact with Soviet VICTOR submarines, KIEV-Class carriers, and BEAR aircraft. The wisdom of common sense and the highest available technology are tremendous advantages, brought to the design of today's Navy and Marine Corps.

Of course, there are many kinds of ships not in the fleet today that could do very well. The British INVINCIBLE-Class vertical or short take-off and landing (VSTOL) carriers, for instance, are quite capable anti-submarine warfare ships. It would be nice to have some of them in the U.S. Navy. There are many attractive European frigate designs, and we could make good use of them. There are also diesel submarines in the navies of our friends that fulfill very effective roles.

If the taxpayers of our allies around the world were not buying these vessels, the burden would fall upon us. But happily, they are carrying a considerable share of the cost of naval defense and American taxpayers do not have to fund a Navy greater than about 600 ships.

Perhaps the oldest defense chestnut debated on op-ed pages and television talk shows is whether our aircraft carriers should be larger or smaller. There is no absolute answer to this question, but the evidence still seems overwhelmingly in favor of the

NIMITZ-Class carrier of 90,000 tons as the optimum size and design for putting air capability at sea. The Soviets appear to agree with this analysis in building the largest possible carrier their facilities will permit.

We reject the simplistic argument of some, that smaller-simpler-cheaper is better. Our tremendous edge in technology is a permanent potential built into the nature of our culture and our economic system. We must build to this advantage, and not trade it away for cheaper, smaller, less capable ships and aircraft built in greater numbers, which is the forte of a totalitarian, centralized, GOSPLAN economy.

It would be a great mistake for us to adopt a defense strategy at sea--any more than on land--that attempts to match totalitarian regimes in sheer numbers of cheap reproducible items. Time and again the high tech solution --tied together with common sense--has proven to be the wisest investment, and by far the most advantageous one for the United States and its allies.

We are developing and building the "right" Navy. Although there are plenty of other kinds of ships we would like to have, and we could certainly use the larger Navy long advocated by the Joint Chiefs, we have stayed consistently with the 600-ship fleet goal because we are prepared to bet that our allies will continue to maintain modern, effective navies and air forces. We are prepared to accept the risk that our nation will make the right decisions to prevent losses of forces early in a conflict, and we think that that is a prudent risk to run in order to have an affordable Navy.

Can we afford the Navy this nation needs?

Some recent commentaries have suggested that we cannot afford to sustain, or properly man, a 600-ship Navy. They are in error. We are doing both and will do so in the future. We have now, under construction and fully funded, all of the ships necessary to attain a 600-ship Navy centered on 15 carrier battle groups, four battleship surface action groups, and 100 nuclear-powered attack submarines.

Our current and future budgets reflect the "sustaining rate" for the 600-ship Navy, an average of 20 ships a year in new construction. The actual number could be higher or lower in a given year, depending on the block obsolescence of various types of ships, and economies of scale exacted in any given year. With an average life of 30 years, 20 ships per year will sustain a permanent fleet of 600 ships.

This "good news" should not blind us to the requirements of the future. A steady 20-new-ships-a-year average will require three percent budget growth. A future of zero-growth budgets--or worse--would mean that we will be unable to sustain a 600-ship Navy--or a capable defense. We know from painful experience in the 1970s that the damage done by no-growth funding is far greater than the mere percentage budget loss would indicate. With zero-or negative-growth budgets, the industrial infrastructure vital to fleet construction and support shrinks dramatically. The result is a loss in competitive bidding and a return to sole-sourced monopolies. Rates of production must then be cut, individual unit costs increase dramatically, productivity falls, and, in the final accounting, the American taxpayer gets much less "bang for the buck." Even worse is the decline in the quality and morale of the people who man the fleet, as we saw in the late 1970s.

Is three percent real growth beyond our means? Throughout the past two decades, many commentators favoring a reduced defense effort have repeatedly predicted that the American people will not support sustained defense growth. That refrain is still put forward by some as a fact of life. While it may express their hopes, it is not supported by history. That view takes as its norm the flat or even declining figures of the immediate post-Vietnam War period. In fact, except for those years, post-World War II naval budgets maintained growth commensurate with our national economy. The middle and late Seventies, by contrast, are now being seen as an anomaly in U.S. history. It is not apparent that the American people wish to "restore" that aberrant pattern of declining numbers of ships, morale, and readiness.

A quarter of a century ago, on January 17, 1961, President Eisenhower delivered his farewell address to the American people. The speech, largely intended to warn the public against excessive and wasteful government spending, was to become the most quoted and remembered of any of his presidency. It was this speech that indelibly entered the term "military-industrial complex" in the lexicon of the American defense establishment. But also in that speech he said:

> "A vital element in keeping the peace is our military establishment. Our arms must be mighty, ready for instant action, so that no potential aggressor may be tempted to risk his own destruction."

Let us look at Defense budget trends since that speech:

	Federal Outlays as % of GNP	DOD Outlays as % of Federal Spending	DOD Outlays as % of GNP
1960	18.5	45.0	8.2
1985	24.8 (up 34%)	25.9 (down 43%)	6.2 (down 23%)

This shows that federal spending as a percentage of GNP has increased 34 percent since 1960. Thus, Eisenhower's fear of ever-increasing government expenditures has been realized. But that increase has not been fueled by defense spending, which as a percentage of total federal spending has dropped almost 43 percent. And, despite the Reagan Administration's military buildup, the percentage of GNP these outlays represent is 23 percent less than Eisenhower's last military budget (FY 1960).

What of the "military officer bloat" that some "reformers" continue to inveigh against, citing as usual Ike's "military-industrial complex unwarranted influence" paragraph? Consider this table:

	Overall DOD General/Flag Officer Strengths	Overall DOD General/Flag Ratio Per 10,000 Military	Overall DOD Officer Strengths	Overall DOD Enlisted-to-Officer Ratios
1961	1,254	5.0	315,000	6.9
1985	1,073	5.0	308,000	5.9

In 1985, the figures for each service were:

	General/Flag Officers	All Officers	Enlisted Personnel	General/Flag Officer-to-Enlisted Ratio	Officer-to-Enlisted Ratio
USAF	338	108,400	488,603	1:1766	1:4.5
USA	412	109,687	666,557	1:1618	1:6.08
USN	253	70,657	495,444	1:1958	1:7.01
USMC	65	20,175	177,850	1:2736	1:8.82
USN/ USMC combined	318	90,832	673,294	1:2117	1:7.413

Once again, the facts do not support the "bloated gold braid" school of defense reform.

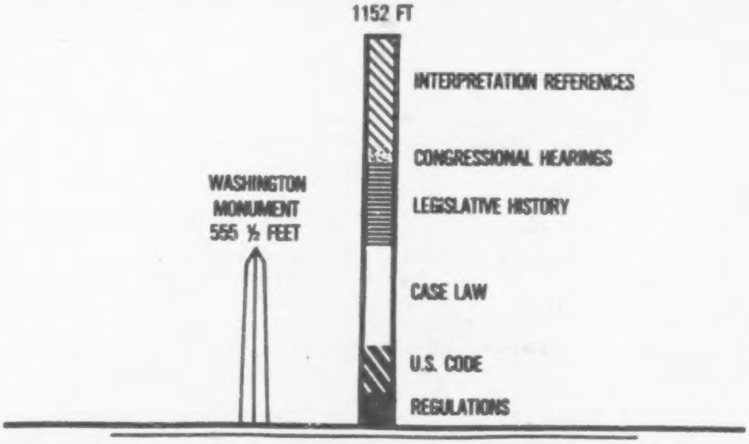
Shifting the focus to budgets and dollars, Eisenhower's last military budget, FY 1960, was $48.1 billion. Due to the ravages of inflation over 25 years, in 1986 dollars this amount swells to $213 billion. The Pentagon will have spent about $270 billion in 1986, an increase of 26 percent over Eisenhower's final military budget. This sounds like "considerable" growth until one considers that in FY 1986 dollars, 1960's GNP was $497.9 billion. Last year's GNP was almost 8 times larger, $3,890.1 billion. So despite the "record defense budgets" bantered about in the media, it is difficult once the facts are examined to conclude anything but the fact that defense spending has not kept pace with the growth in the national economy since 1960.

Still, Eisenhower's prophecies have been borne out. His admonishment to maintain balance among national programs has not been heeded. But, the much maligned military-industrial complex is not to blame for this imbalance. While Department of Defense (DOD) outlays as a percentage of GNP were dropping 23 percent in a quarter century, non-DOD outlays grew more than 80 percent. In

Ike's last year, 55 percent of all Federal outlays were non-defense related. In 1985, 74 percent of Federal spending was non-defense related, an increase of more than 35 percent.

Also, since Eisenhower's time, legislative oversight has now become anarchy. How? Ten years ago four committees wrote legislation on Defense. Today 24 committees and 40 subcommittees oversee Defense. By actual measurement, current law and regulation on Defense procurement fill 1,152 linear feet of law library shelf space. Thousands of new pages are enacted yearly and almost none removed.

ACQUISITION LAWS AND REGULATIONS—1152 FEET OF LAW LIBRARY SHELF SPACE



Is the Defense establishment overgrown? Yes. To cope with this avalanche of legislation and regulation, each military department headquarters numbers 2,000, as does the Joint Staff and its appendages and the Office of the Secretary of Defense staff. There are 10 Defense agencies numbering 85,000, and nine joint and specified commands that each average nearly a thousand. No intelligent human being would pay $700 for a toilet cover. It took a unified buying agency of 50,000 billets to do that.

This vast bloat in Congress and the executive branch has all been done over the past 30 years in the name of reformation at the altar of the false idols of centralization and unification. It has completely "clericalized" the procurement process, destroying authority and accountability and creating an environment in which only monopoly, cost-plus and single-source contracting processes flourish in a natural state. Competition, discipline, austerity and accountability are forcefully opposed by statutory complexity, bureaucratic inertia and congressional resistance. All this despite a few steady voices in Congress who have for years tried to improve the process.

We need no new legislation; we need the repeal of hundreds of linear feet of existing statutes and regulations.

We need no new bureaucratic entities; we need a large reduction in the number and size of existing ones.

We need no more centralization and unification; we need more decentralization and accountablility through which the strong Secretary of Defense can unify all efforts to a central policy.

We need Congress to end the current chaos of subcommittees and reassert an orderly, strong role in meeting its constitutional responsibilities through a reasonable number of serious subcommittees.

In short, both Congress and the defense establishment must be de-organized to liberate the thousands of dedicated defense professionals in both institutions from their bureaucratic bondage and allow their common sense to prevail.

Management Initiatives

Those who look pessimistically at the costs of sustaining our Navy assume that just because this bloated, inefficient congressional-executive system has been in place for some 30 years that it will remain in place forever. I do not accept that. Moreover, under Secretary Weinberger's leadership we have shown in the Navy a historic reversal of the trend of inevitable cost increases.

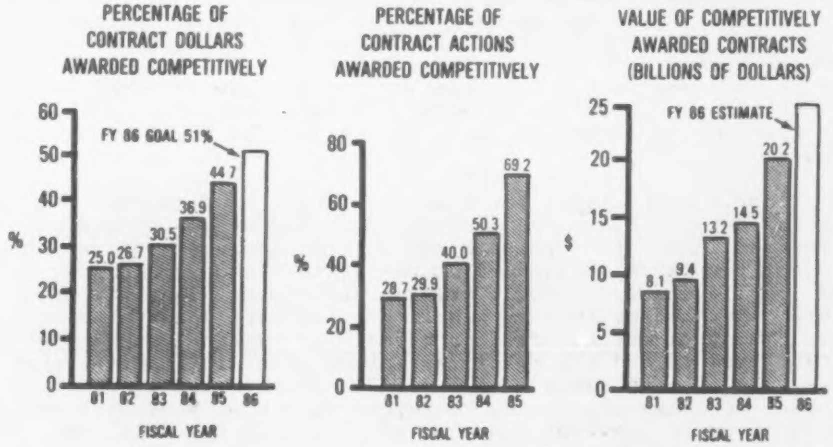
The remarkable progress achieved in five years in the naval recovery program is testimony to the success of the vigorous program of improved management and acquisition reform instituted by Secretary Weinberger. Five years ago he reversed a long and disastrous trend toward centralization and bureaucratization of management, with its attendant diffusion and destruction of line accountability. His leadership has brought about a new discipline and new accountability. Management authority has been returned to the Service Secretaries and they have been held accountable for achieving real reform in the development and procurement process. The Committee should take special note of the ten fundamental changes made in the management of the Department of the Navy:

- True competition. We have sought true competition, not merely the appearance of competition through source selection followed by decades of monopoly production. We have pursued a policy of establishing second sources in every appropriate program. We have raised the percentage of competition in our shipbuilding from 15.7 percent in 1980 to 85.6 percent in 1986, producing an average of $1 billion in cost underruns for each of the last four years. In 1985 we awarded $1.7 billion in competitive spare parts procurements, a 70 percent increase over FY 1984 and a 293 percent increase over FY 1982. Contracts for shipboard parts in 1985 were 12 percent lower on average than the previous year for the second year in a row.

In 1983 we established at flag rank a Competition Advocate General, the first such position within the Defense Department. He now has a network of more than 250 Competition Advocates throughout the Navy's acquisition commands.

In FY 1985 we awarded $20.2 billion competitively, or 45 percent of all Navy procurement dollars. That performance reflected $5.7 billion more than FY 1984 and $10.8 billion more than we awarded competitively in FY 1982. Over 69 percent of all individual contract actions executed in FY 1985 were competitive, versus 50 percent in FY 1984 and 30 percent in FY 1982.

DEPARTMENT OF THE NAVY PROCUREMENT COMPETITION PERFORMANCE



PERCENTAGE OF CONTRACT DOLLARS AWARDED COMPETITIVELY

PERCENTAGE OF CONTRACT ACTIONS AWARDED COMPETITIVELY

VALUE OF COMPETITIVELY AWARDED CONTRACTS (BILLIONS OF DOLLARS)

Contract savings from this new competitive approach in shipbuilding have been enormous. Today, for example, the last contract that we signed for a follow-on Aegis cruiser was $900 million. Four years ago, these cruisers cost more than $1.2

billion each, and were projected to reach $1.6 billion by the end of 1985. It did not happen, however, because we brought competition into the program. Both producing yards brought in new efficiencies and instituted strict cost discipline. The list goes on and on. As a result of these competitive savings, we were able to fund $410 million of the $467 million cost of the battleship MISSOURI (BB 63) at $430 million from contract savings and, in addition, were able to contribute $640 million from our overall shipbuilding savings to assist in funding the MX program.

We continue to look for innovative ways to foster competition. For example, private and public shipyards went head-to-head in an overhaul competition beginning last September. The first of its type, the competition is a test program to encourage cost savings and improve performance in both public and private shipyards.

- Gold plating control. Without question, competition and fixed-price contracts are the formula for reducing costs in major procurement. But they can also be a formula for disaster, litigation, and claims, if a military service does not discipline its tendency to gold plate and to increase and change requirements during contract execution. We in the Navy have applied a new asceticism to our gold-plating lusts. Gold plating is now under firm control. An Air Characteristics Improvement Board and a Ship's Characteristics Improvement Board have now been established to control design and equipment changes in production of aircraft and ships. This has proved to be a very effective obstacle to gold plating and will carry into force our "Block Upgrade" policy. Under this policy, necessary changes and modernization in design are made only with new annual contracts and are priced and negotiated at that time rather than piecemeal in the middle of production runs. Very substantial savings have resulted from this procedure. No contract or engineering changes may be submitted for negotiation without the signature of the Commandant of the Marine Corps or the Chief of Naval Operations and the Secretary of the Navy.

- Program stability. You will note that the personnel readiness, shipbuilding, and aircraft procurement goals have not been changed in the five years since I first appeared before you. This stability is unprecedented in peacetime history, avoiding the ragged ups and mostly downs of previous five-year plans with the terrible costs and efficiency penalties that such uncertainty brings. Most of our aircraft programs have remained at stable long-term levels, and the multi-year procurement initiatives that we have been able to achieve in the C-2A aircraft and Ch-53E helicopter programs are saving taxpayers more than $190 million compared to their previously projected annual purchase prices.

- Contract discipline, accountability, and quality assurance. We have moved from a policy of treating cost-plus contracts as normal to treating them as being only acceptable as an absolute last resort for very high risk programs. Our policy now requires more equitable sharing between the government and its contractors, providing increased incentives for excellent performance and immediate contractor penalties for poor performance. We have put all of our aircraft procurement programs on firm-fixed-price type contracts and all of our ships on fixed-price incentive contracts, most with a 50/50 share line above and below the contract price. We have renegotiated contracts inherited from prior years to eliminate the more lenient terms on such programs as TOMAHAWK, TRIDENT, and the LOS ANGELES-Class submarine. We now provide our contractors with the opportunity to make more profit than heretofore allowable, by achieving performance that nets the taxpayer a substantially lower price. The corollary is that we require the contractor to bear immediately the cost of poor performance. Industry had responded at first with reluctance and now mild enthusiasm. After years of very late deliveries, cost overruns, and litigation of claims, all of our submarines are now on or under budget. The four most recent TRIDENT submarines were delivered to the Navy four to seven weeks early. THEODORE ROOSEVELT (CVN 71) was launched a year ago nearly 18 months ahead of schedule and more than $100 million under budget. The TRIDENT submarine ALASKA was just delivered three months early and $60 million under budget.

And we are moving to shift more facilitization and tooling start-up costs from government to industry. Defense contractors are getting fair profits as a percentage of sales, but measured as a return on assets they are grossly out of line. The reason is that until now Navy policy did not require investment in productive capital equipment and facilities for production of Navy work. Under our new policy, once production has been approved, contractors are expected to provide all production tooling and test equipment and the required facilities. Recovery of these investment costs will be through standard business practice -- depreciation and profit -- as negotiated between the Navy and the contractor.

- People. The people who manage our acquisition programs are critical to improving the way we do business. We must have experienced and highly skilled people performing program management and contracting functions to implement our acquisition strategy and cost-reduction initiatives.

Historically, Navy acquisition and procurement management has been plagued by rapid turnover of personnel, and inadequate experience and qualification in those assigned to those responsibilities. To correct these shortcomings, the most far reaching reform of naval officer career patterns undertaken in this century has now begun. A year ago we established the "Material Professional" career path. The first Material Professional screening boards met last year, and we now have over 900 officers, from commander to admiral, so designated. The career path of the Material Professional integrates sea tours with acquisition tours for an officer's entire career. Once an individual is selected to be a Material Professional, the warfare speciality is relegated to a secondary role. Approximately one-third of our flag officer billets have been set aside for Material Professionals. Now, pursuing a career in procurement and acquisition provides a path to promotion all the way to four stars that is as attractive as a line career.

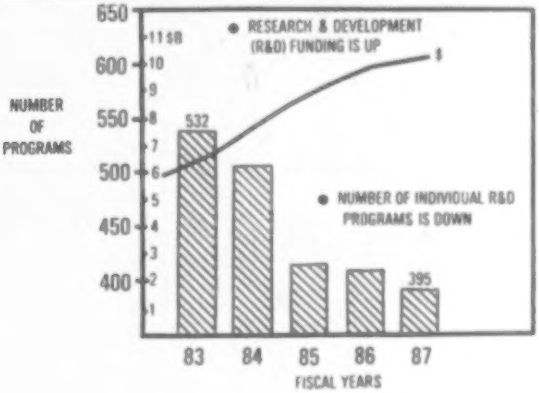
Establishment of the Material Professional's career path provides the education, experience, and most importantly, the career incentives required to make our acquisition managers capable, skilled business professionals with the warfare background necessary to properly manage weapons systems. No procurement or acquisition billet may now be filled by other than a Material Professional without a personal waiver from the Secretary of the Navy.

Our civilian Senior Executive Service (SES) is being reformed as well. Members of the SES are our top-level civilian managers. Many have responsibilities equal to those of chief executive officers (CEOs) and vice president of major industries. In order to give our SES members a better range of experience and to help them understand a wide variety of Navy programs and areas, we have mandated a five-year rotation plan. This plan is based on the private industry philosophy that, as an executive advances, he or she needs to understand--hands on--all aspects of a company's business.

Research and development (R&D) reform. We have stopped chasing R&D rainbows. In a major effort to make dramatic increases in the productivity of our R&D dollars and in substantially shortening the time from concept to delivery, fundamental changes have been made in R&D management. In 1981 we had more than 500 R&D programs. Today we have reduced that to 395, while increasing steadily the amount of funding placed in these programs. We have moved away from cost-plus contracts for full scale engineering development, and we now require the contractor to participate in risk sharing. We are no longer spreading too few dollars over too many programs where the payoffs in capability and efficiency are marginal. (See illustration next page.)

Beyond even this, we have pioneered a dramatic new concept in firm-fixed-price development of aircraft, where appropriate. This approach prevents both the errors of "total package procurement" and "cost-plus buy-ins". The first of these breakthrough initiatives were the fixed-price contracts for the complete redesign of the F-14D and the A-6F aircraft upgrade programs. Both of these aircraft will be entirely re-equipped with new engines, new avionics, new survivability features, new cockpits, and new radars, for a combined total R&D cost on a firm-fixed-price contract totaling less than half of the cost that it took to develop the F/A-18. The third example of this approach was the contract signed in 1984 with McDonnell Douglas and British Aerospace on a firm-fixed-price package of $438 million for the complete development of the T-45A Navy carrier jet trainer. This contract was brought in at about half of the budget estimate of $810 million.

DEPARTMENT OF THE NAVY
RESEARCH AND DEVELOPMENT REFORM
"STOP CHASING R & D RAINBOWS"



Achieving affordability through high technology. Emphasis in our research and development programs will continue to concentrate on achieving levels of high technology as a fundamental tool of American defense policy. We can never hope to match the numerical superiority of a totalitarian adversary such as the Soviet Union, but we can indeed maintain technological superiority to counter its advantage in numbers. The trendy arguments that cheaper and smaller are better are simply false. They have been invalidated time and time again in the Gulf of Sidra, Bekaa Valley, and the Falkland Islands. The results we are achieving now, with the F/A-18--for example--requiring less than half the maintenance man-hours per flight hour of the aircraft that it replaces, have enabled us to reduce our manpower requirements by some 50 personnel per squadron.

Similarly, our TICONDEROGA-Class AEGIS cruisers are each manned by only 300 enlisted men and 26 officers, roughly a third of the complement needed for the CHICAGO-Class they replace. The AEGIS ships are also many times more capable than their predecessors.

The current generation of high tech naval aircraft such as the F/A-18, F-14A, and A-6E now has a safety record more than twenty times better than the so-called low-cost fighters of 30 years ago.

Putting our own industrial house in order. We recognize the need to put industrial activities--shipyards, air rework facilities, public works centers, laboratories, and ordnance activities--within the Department of the Navy on a sound and efficient basis, when measured against like industry in either the public or the private sector. The Department has completed a year-long effort to design major cost-saving management reforms in its industrial activities. We have directed the implementation of initiatives in seven functional areas and expect to achieve as much as a 25 percent savings in operating costs, with greatly improved fleet support, over the next one to two years. Actions to streamline management and operations with the resultant efficiencies are currently underway in naval shipyards, public works centers, naval air rework facilities and weapons/ordnance activities, and will shortly commence in laboratories and data automation centers. We are planning no sweeping redesigns. We intend to go back to the basics of management and control. Our industrial operations can be managed through the use of many of the same techniques that are found in successful private companies. Major improvements will result from returning authority commensurate with their responsibilities to activity commanders; doing a better job of matching workforce with workload; and balancing costs and schedules. The reform of management of our naval industrial activities is currently our highest management priority and will remain so until firmly in place and anticipated efficiency savings are realized.

De-organizing and de-centralizing the Bureaucracy. The horrendous nature of the current over-layered system of defense management is well known. We need no new bureaucratic entities; rather, we need a large reduction in the number and size of existing ones.

Accordingly, this past year we disestablished one of our own chief offenders, the Naval Material Command (NAVMAT). This has decentralized acquisition management in the Navy and streamlined the decision-making process. NAVMAT headquarters authority has been distributed among five individual systems commands formerly under its control. Four hundred and fifty positions have been eliminated, improving accountability in program management. The systems commands themselves are being realigned. The Electronics Systems Command has been restructured to include space systems, ships systems and aircraft systems, and other service and allied systems in a new Space and Warfare Systems Command.

Also, we reorganized the Naval Education and Training Command last year, cutting its manning approximately in half. Functions were passed to subordinate commands to eliminate redundancies.

Cutting bureaucratic make-work. In related moves, we have drastically reduced the non-mission-related administrative workload imposed on the fleet. A recent Blue Ribbon Panel study determined that a bloat of bureaucratic burdens has been imposed on our operational units by headquarters staffs and Congressional reporting requirements. We were appalled to find that in operational squadrons, aviators were forced to spend an average of two-thirds of their time on non-mission-related paperwork. As a result of this study, we have reduced administrative-related reports and duties imposed by Department of the Navy directives by over 50 percent. We have also recommended to the Secretary of Defense that thirty-four of the over seventy reports required by Office of the Secretary of Defense (OSD) directives should be cancelled. Secretary Weinberger has indicated that he will review the list of reports and that action will be taken to cancel those that are unnecessary. In the case of those reports established by statute, he will seek Congressional relief. Secretary Weinberger also stated that the results of his review will be applied to the entire Department of Defense.

Management Initiative Results

The results of these management initiatives are quite dramatic. A few highlights are listed below:

- The disputes, litigation, claims, cost overruns, and schedule delays that characterized naval shipbuilding in the 1970s have been eliminated. Over the last four years (CY 1982-85), 78 ships have been delivered to the Navy of which 30 were ahead of schedule, 33 on schedule, and only 15 behind schedule. The net of all four years is 46 months ahead of schedule for all ships. After years of bitterness and massive cost overruns and claims in our submarine programs, all submarines have been delivered on or under budget. For the fifth straight year there has not been a single new construction contract shipbuilding claim outstanding against the Navy.

- Aircraft carriers. Our acquisition strategy for nuclear aircraft carriers has been very effective in reducing the cost of achieving airpower at sea and in accelerating the growth to a fifteen carrier battle group force level. Originally, a split buy of two new aircraft carriers in separate annual procurements for ABRAHAM LINCOLN (CVN 72) and GEORGE WASHINGTON (CVN 73) was estimated to cost $8024M. Our multiple ship award strategy in FY 1983 brought these costs down to $7270M, a savings of $754M. Furthermore, since contract award, sound management practices and the success of the Administration's national economic policies have achieved further cost savings of another $754M, bringing the estimated end cost to $6516M for the two CVNs. These savings permitted us to return $450M from the carrier account alone for reprogramming to the MX program. Escalation adjustment and shift of funds to other programs resulted in a further transfer of $54M from the carrier program.

In addition to saving over $1.5B by our CVN 72/73 acquisition strategy, we will also deliver these ships earlier than would have been achieved by the traditional split annual procurement approach. We estimate that CVN 72 and CVN 73 will each deliver 22 months earlier than would have been achieved by the traditional approach. Also, we expect THEODORE ROOSEVELT (CVN 71) to deliver by September 1986, at least 17 months earlier than the original schedule, through incentives we have established in the CVN 71 construction contract. Thus, a total of 61 additional nuclear aircraft carrier ship months will be achieved through our acquisition strategy.

- AEGIS cruisers. Bath Iron Works was selected as a second source to compete with Litton for procurement of AEGIS cruisers. Contracts were signed in December 1983 for the first three cruisers to be competitively awarded: two to Litton and one to Bath. The contracts resulted in a net constant dollar savings of more than $100 million compared to the previous year's sole source award of three ships to Litton. In November 1984, the second year of competition resulted in Bath winning two FY 85 ships and Litton one, with a net constant dollar savings of $97.7 million compared to the FY 1984 award. In December 1985, the third year of competition resulted again in Bath winning two FY86 ships and Litton one.

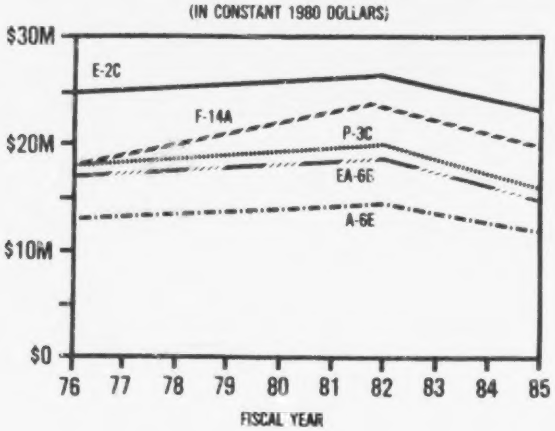
- Battleships. NEW JERSEY was recommissioned in December 1982 ahead of schedule and under budget. IOWA was delivered well ahead of schedule and under budget in April 1984 and is now deployed in the Caribbean. MISSOURI was in large part funded from contract savings and is currently ahead of its reactivation schedule in the Long Beach Naval Shipyard. Requests for proposals are out for WISCONSIN, fully funded by Congress in FY 1986. Award of a contract is anticipated in October 1986, with ship delivery in January 1989.

- Build/Convert and Charter Programs. Thirteen Maritime Pre-positioning Ships (MPS) and five T-5 tankers have been contracted for and are under conversion and construction. Eleven MPS have delivered; the final two deliver this year. Three of the T-5s have been delivered; the final two deliver this year. These ships provide a dramatic new capability to preposition the equipment and supplies to support three Marine Amphibious Brigades in areas of potential crisis around the world. The first six of the MPS ships were completed two months ahead of original schedule and under budget.

- Aircraft Unit Costs. The fly-away cost of the F/A-18 HORNET has declined almost 17 percent during the past three years, from $22.5 million per plane to $18.7 million in 1985, a savings of 16.9 percent. In terms of FY-82 dollars, we are paying a price 32 percent below the rate paid in FY-82. This is part of a sea change, an overall downward trend of major Navy aircraft prices during the 1980s, a break with 30 years of uninterrupted cost escalation in naval aircraft procurement. (See illustration next page.)

- Contract Manning. In the major Reagan Administration effort to reinvigorate the maritime industry and the merchant mariner profession, a total of 16 more ships, including cable ships, missile range ships, and fleet tugs, will be offered for

U.S. NAVY
AIRCRAFT UNIT COST TREND 1976-1985



contract manning in FY 1986 and 1987. This will raise to 40 the total of naval ships offered for contract manning added by this Administration. This has resulted in a cost reduction of nearly 40 percent.

- Small Business. The Navy Department (from FY 1982 to FY 1985) increased by 55 percent in dollar value its awards to small businesses, including women-owned and minority-owned concerns. These contracts to small business totaled $7.046 billion in FY 1985, reflecting a new commitment to bring the benefits of competition and the small business industrial base to Navy procurement.

- Navy Acquisition Reporting System. This new system has been a dramatic success. It involves a new, simple, and straight-forward acquisition reporting system for the top 60 programs. It requires quarterly reports on any changes of estimated cost for R&D or production or changes in schedule for each of those 60 programs and provides early warning of performance difficulties. While this system is primarily meant for senior Navy management, its effectiveness makes it a prime candidate for eventual replacement of the current Selective Acquisition Reporting System.

- Assignment policy for Program Managers and Industrial Facilities Commands. The minimum tour length for officers serving in these important acquisition billets has been lengthened to four years. Arrival and departure from these assignments now is planned to coincide with major Department of the Navy Systems Acquisition Review Council (DNSARC) milestones and/or program starts or completions. Provision of guidance to promotion boards has been modified to increase emphasis on the performance of officers in acquisition management billets.

- BOSS. The Department of the Navy instituted in 1983 a spare parts procurement program called "Buy Our Spares Smart" (BOSS). It is particularly frustrating to us to find that the abuses and overcharging uncovered by the Navy itself over the past three years--items for which we recovered monies--are being used by headline-hunting critics seeking to discredit the very effort itself. Working with suppliers and parts contractors, we have made great progress in finding abuses, receiving refunds, challenging sole-source relationships, locating alternative sources, and reducing barriers to competition for spare parts by identifying and eliminating proprietary-data requirements. There are more than 2.3 million inventory items in the Navy's spare parts supply system (over 65 percent are controlled by the Defense Logistics Agency). We are methodically reexamining the more than 600,000 under Navy control--over 100,000 of them during this past year.

Return on investment in BOSS is considerable. During 1984-1985, the Navy invested $101 million in BOSS resources and achieved cost avoidance exceeding $520 million.

In 1983, 13.5 percent of our spare parts were procured competitively. In 1985 the figure was 33.8 percent. We are competing more buys to achieve more reasonable pricing. Where competing the buy is inefficient, we are exercising proper management techniques to control prices. A 1983 audit showed 35 percent of our non-competitively procured spares to be overpriced. By 1985 that had been reduced to 18 percent, and the trend continues downward.

- Depot Level Repairable (DLR) Components. In a major innovation in the management of maintenance funding, we have instituted a decentralization of the management of DLR components to the ship and the air station level. From 1981 to 1984 we tested financing the procurement and repair of non-aviation DLRs through the Navy Stock Fund. This improved material availability by 38 percent, reduced casualty response time by 26 percent, and increased the carcass return rate by 36 percent. We then began testing financing procurement and repair of aviation DLRs through the Stock Fund in April 1985. These initiatives establish a buyer/seller relationship between the Stock Fund and its customers who in turn are being held accountable for their expenditures. This should bring a much more frugal approach to ordering, based on truly needy, and an incentive to repair at the lowest authorized level and not waste repairable assets which can be turned in for credit.

Our management and acquisition reforms are not intended to impact the system for a few brief years only and then be buried under the weight of bureaucratic inertia and free-spending reaction. They are clearly being institutionalized into the very fabric of Navy life. In November 1985 I signed out an acquisition policy instruction codifying our acquisition reforms and ensuring their institutionalization at all levels of the Department of the Navy.

DEPARTMENT OF THE NAVY BUDGET FOR FY 1987

The Source of the Navy/Marine Corps Budget

Commentators with little knowledge of defense policy have criticized the service budget requests as exercises in simply asking for more programs that have a momentum of their own. Nothing could be further from the truth. The preparation of the 1987 budget began with the foundation of national strategy and the maritime objectives assigned to the Navy and Marine Corps. From maritime strategy came the force structure planning requirement. Throughout the year, the strategy and the force levels have been refined and tested in multi-national exercises, simulations, and wargaming. The most important input to the preparation of this budget are the assessments of the operational and theater commanders in their net assessments and recommendations for funding priorities. The lessons learned from real-world operations and conflicts such as the Falklands and the Middle East are applied and often further modify the budget planning. From the start of the FY 1987 programming process in September 1984, the application of common sense in placing priority on the "Strategy Areas of Concern" has been applied throughout. Then after exhaustive scrubbing and debate within the Department of Defense and with other agencies of the government, the Department of the Navy budget request has been completed.

Readiness

Personnel Readiness. The FY 1987 budget continues to place personnel readiness at the top of spending priorities as in the previous five budgets. Nothing is more important than our personnel. The tremendous turn-around in morale and personnel quality and performance has proved to the skeptics that, for the Navy and Marine Corps, an All-Volunteer Force produces a better and readier force for the long term than a peacetime draft. This success, however, depends on the maintenance of adequate compensation and adequate quality of life. We must maintain budgetary support for those priorities. Our budget request contains the following priority programs:

- Even with the 3% pay raise on 1 October 1985, our uniformed people are still behind civilian wage growth by 8.3%. The FY 87 four percent increase requested 1 October 1986 parallels the projected OMB FY 87 civilian wage growth. This is the absolute minimum we need to stay even and not widen the gap even further.

- Sea-duty enhancement programs. Naval service can be arduous, dangerous, and dramatically ill-paid when compared to civilian careers requiring comparable skills. We have been able to bring this into better balance through our sea pay, submarine pay, and special pays. These are continued and adjusted upward in the current budget. We have new initiatives, of particular interest, to correct the injustice currently imposed in reimbursement of travel expenses, by increasing certain reimbursements and weight allowances.

- Increases in End-Strength. We will continue to add about 20 ships per year to the fleet from now until 1989. We must have increased end strength to man these ships and our larger numbers of aircraft and support units. Because of Congressionally imposed reductions in the last four years, our end strength increase has not matched the requirements of the ships that have been added. The shortfall has been imposed on the shore establishment and that expediency can no longer absorb further cuts. Our active force end strength must be raised in FY 1987 by 11,400 for the Navy and by 1,500 for the Marine Corps. Reserve force structure also needs expansion. We are requesting an increase of 13,100 Reserve average strength billets for the Navy and 900 for the Marine Corps.

- Aviation Officer Career Pay (AOCP). One of the most dramatically successful and cost effective compensation initiatives in Navy history has been the AOCP program. Retention of naval aviators almost doubled in the last five years of paying AOCP. Pilots and naval flight officers (NFOs) are currently being retained at the rate of 53 percent and 73 percent respectively. Since the inception of the program, 1008 additional aviators have remained on active duty as a direct result of AOCP. The resulting cost savings were $823 million, which would have otherwise been needed to train their replacements. Shortages remain, however, in nearly all pilot and NFO communities. (See illustration next page.)

In each successive year of this bonus, Congress has imposed restrictions and reductions. We have seen a significant drop in the pulling power of this bonus during the past year.

The smaller numbers and the shorter periods of eligibility have reduced the attractiveness of the bonus by an appreciable degree. We have seen a sudden spurt in resignations of pilots, and we believe the time to deal with this problem is right now before it reverses the positive trend of recent years. We will be proposing enhancement modifications to the Committee which should increase the attractiveness of the AOCP bonus and eliminate the current loss of entitlement to hazardous duty incentive pay and aviation career incentive pay. This remains the most critical compensation initiative we require.

- Nuclear Officer Incentive Pay. Retention of our nuclear-trained officers has improved by about 10 percent over the past five years. Nevertheless, a 22 percent shortfall in experienced nuclear trained submarine and surface warfare officers remains. We expect the shortfall to decrease to 11 percent by

NAVAL AVIATOR SHORTAGES

COMMUNITY		PROJECTED SHORTAGE OF MID GRADE OFFICERS
VAL/VFA	PILOT	-218
(LIGHT ATTACK)		
VF	PILOT	-112
(FIGHTER)	NFO	-11
VAM	PILOT	-95
(MEDIUM ATTACK)	NFO	-28
VAQ	PILOT	-38
(ELECTRONIC COUNTERMEASURES)	NFO	-42
VS	PILOT	-72
(CARRIER ASW)	NFO	+ 11
VAW	PILOT	-39
(CARRIER AEW)	NFO	-25
VQ	PILOT	-42
(ECM/COMM)	NFO	+ 38
HS	PILOT	-15
(CARRIER ASW)		
HSL	PILOT	-182
(LAMPS)		
VP	PILOT	-186
(MARITIME PATROL)	NFO	+ 48

NFO - NAVAL FLIGHT OFFICER

1990 with the enhancement of Nuclear Officer Incentive Pay that was authorized in FY-86. Because of our shortages, we are forced to use our exceptional lieutenants in lieutenant commander nuclear engineering billets. We recognize the significant responsibility entailed in these assignments by "spot promoting" them to lieutenant commander. For this reason, spot promotion authority is essential. The accession bonuses paid to officers entering the program have met with continued success. This year we achieved 83 percent of our accession goal. The provision of these pay incentives for nuclear trained officers must be continued if we are to achieve our goals of manning the nuclear-powered ships with adequate numbers of trained and experienced officers.

- Recruiting and Advertising. As the target population for recruiting grows smaller every year and the economy grows strong, recruiting becomes increasingly more challenging. We have found disturbing survey evidence that youth awareness of Navy and Marine Corps programs is declining steadily. Navy/Marine Corps advertising acts as a significant tool for recruiting and we are asking for increased funding for both recruiting and advertising.

Material Readiness. Next to personnel, material readiness has received the highest funding priority of all Navy accounts during the last five years, and is up more than 30% for ships and 40% for aircraft since 1981 (as measured by C1 and C2 ratings). As we move steadily to our 600-ship Navy in 1989, we have maintained funding for material readiness proportionate to the growth in ships and aircraft. The FY 1987 budget should continue to support that proportion and the steady improvement in overall readiness outlined earlier. We are requesting funding, for instance, for the ships' maintenance program to provide for the overhaul of 37 active and six Reserve ships. This is being done at considerably lower cost because of our shifting of overhaul contracting to a more competitive process based on fixed-price bids. It reflects also the carefully engineered extension of operating periods between overhauls for ships and aircraft, and the overhauling of selected systems during shorter regular maintenance availabilities.

The FY 1987 funding request for flight hours has actually decreased from the past through tighter management while maintaining our goal of 25 flight hours per month per air crew. This has been accomplished in spite of a 4% growth in total hours, due to the addition of 112 crews.

Ship steaming days (50.5 days per quarter for ships in forward deployed fleets; 29 days for other ships) are funded at the same rate as FY 1986, adjusted upward for the larger size of the fleet. This figure is based on the required steaming days to maintain readiness and training.

- Aviation support. Planned procurement of Aviation Spare Parts (AVCAL), Aircraft Armament Equipment (AAE), Aviation Weapon Support Equipment (AWSE), and Ground Support Equipment (GSE) is on track. Current funding provides for 90 days of AVCAL for 13 carriers in 1987, for 14 in 1988, and for 15 by 1989. GSE, AAE, and AWSE will achieve 100% carrier and shore station fill by 1988 through competition and procurement savings.

- Ammunition. A major reform of our procurement practices in munitions, emphasizing competition and dual sourcing, has made it possible now to have in hand the production rates necessary to reach our complete warfighting sustainability goals by 1991. That procurement rate is funded in the current budget. We intend to have second sources for virtually all requested surface-to-air and air-to-air missiles, ensuring that we will be able to sustain our steady buildup toward inventory requirements at the lowest possible cost. Full funding of our requests is essential if we are to maintain the efficiency and cost reductions we are now achieving through competition and production rates at optimum levels for lowest cost.

Shipbuilding

The FY 1987 budget requests 21 new-construction ships, three conversions and reactivations. In the FY 1987 budget we continue dealing largely with the modernization and maintenance of the 600-ship Navy in the '90s, rather than force-building to that number, already achieved during the last five years.

Aircraft Carriers. There are no aircraft carriers in the FY 1987 budget and no new-construction carriers are needed until the early 1990s. We intend to request long-lead funding in FY 1992 for a NIMITZ-Class replacement for MIDWAY. THEODORE ROOSEVELT was launched in October 1984 and will become the 14th deployable carrier in 1986. ABRAHAM LINCOLN will join the fleet in 1989 as the 15th deployable carrier, and GEORGE WASHINGTON will replace CORAL SEA in 1991.

Battleships. The fourth and final battleship, WISCONSIN, (BB 64), was fully funded for reactivation with FY 1986 appropriations.

TRIDENT Submarines. The FY 1987 budget contains funding for the 14th OHIO-Class submarine, which will have a TRIDENT II (D-5) missile configuration.

Attack Submarines. The FY 1987 budget contains funding for four LOS ANGELES-Class nuclear attack submarines. It is essential, now that we continue to have both Electric Boat and Newport News producing these submarines with great efficiency, that we take advantage of the capacity to produce the numbers required at substantial savings. We estimate that the difference between contracting for four of these submarines competitively and contracting for three competitively means a reduction in price of $40 million for each of the four boats.

AEGIS Cruisers. The FY 1987 budget contains funding for two TICONDEROGA-Class AEGIS cruisers, the 20th and 21st of the class. These ships will be competed for on a fixed-price basis for the fourth straight year between Bath Iron Works and Litton.

AEGIS Destroyers. The FY 1987 budget contains funding for three ARLEIGH BURKE-Class destroyers. The lead ship was appropriated in FY 1985, and we expect to begin competitive series production in two shipyards this fiscal year. These ships are not force-builders, but will replace existing DDG 2 and DDG 37 class destroyers on a one-for-one basis.

Amphibious Ships and Landing Craft. Five years ago we embarked on a program to expand our amphibious capability to meet the lift requirements of the assault echelon of one Marine Amphibious Force and one Marine Amphibious Brigade. That program is progressing very nicely. All of these ships will incorporate design features to operate the new generation of Marine Corps equipment such as the CH-53E, the MV-22 OSPREY (formerly the JVX), the AV-8B HARRIER, the LCAC, and the complete new suite of armor, artillery, and infantry equipment now entering the Marine Corps inventory.

LHD-1: The FY 1987 budget contains long lead funding for the third and fourth ships of the new WASP-Class convertible amphibious V-STOL carrier, to be built in FY 1988 and FY 1989 respectively.

LCAC: The FY 1987 budget requests no new Landing Craft Air

Cushion (LCAC), initially produced by Bell Aerospace Textron. These craft are undergoing extensive operational tests and debugging. A second-source contractor--Lockheed--was selected, and competitive production by the two shipbuilders will continue with the FY 1986 SCN award. The outyears envision a 9-craft-per-year program. This is the most revolutionary enhancement of landing craft in Navy-Marine Corps Team history.

Mine Countermeasure Ships. The reconstitution of our mine warfare capability is now in full swing. For FY 1987 we are requesting authorization and funding for four CARDINAL-Class coastal minehunters. Bell Aerospace Textron of New Orleans won the competition for the production of this new class of ship, based on the revolutionary surface effect design. For FY 1988 we are requesting authorization for four more, plus three AVENGER-Class mine countermeasure ships, a program we have restructured in accordance with our new management initiatives.

Support Ships. The FY 1987 budget contains funding for one fast combat support ship (AOE), two more oilers (T-AO), three more ocean surveillance ships (T-AGOS), one oceanographic research ship (AGX), and jumbo conversion of an oiler (AO). These eight ships will be awarded through fixed-price competition.

Sealift and Maritime Pre-positioning. Our budgets for the last five years have included significantly more money for strategic sealift than all previous budgets going back to World War II put together. The FY 1987 budget sustains that momentum with funding requested for the conversion of two more auxiliary crane ships (T-ACS). We have now had much success with our program to grow the Ready Reserve Fleet from 32 to 85 ships, having recently purchased 13 barge and vehicle carriers for $206.7 million. We are expanding our objective to achieve 100 dry-cargo ships, plus additional bulk oil carriers. The final two Fast Sealift Ships deliver this year, completing the eight SL-7 ship upgrade to lift rapidly an entire army armored division.

Naval Aviation

This year marks the 75th anniversary of Naval Aviation. The FY 1987 budget request contains 271 new Navy and Marine aircraft. This will build to an active inventory of about 5,700 aircraft, with roughly a quarter of these operated by the Marine Corps. A 14th active air wing is planned for FY 1987, and our two reserve air wings are currently modernizing as part of our horizontal integration.

F-14 TOMCAT Fighter. We have been able to maintain the stability in the F-14A production rate that, along with disciplined management, has brought about actual cost reductions in the airplanes. The FY 1987 request for F-14A aircraft was reduced to 15 because of the delays in production associated with incorporating the F-110 engine in all FY 1986 and subsequent aircraft. In addition, the Navy will continue development of the

F-14D, under the firm-fixed price contract signed last year. This airplane will include new engines, avionics, survivability features, and radar upgrades. First production of the F-14D is planned for 1988.

F/A-18 HORNET Strike Fighter. We are requesting 120 F/A-18 aircraft. Because of the success of competing this airplane against the F-14 and the A-6, and because of very good performance by the contractors, we have brought the price of the F/A-18 down significantly every year. This year we have increased production to a more economic rate. We are considering a multi-year contract for the FY 88-92 buy-out of the program and anticipate even greater savings. This aircraft has set records for reliability and maintainability and proven its operational viability across the spectrum of warfare.

A-6 INTRUDER All-Weather Attack Aircraft. The A-6E continues to prove that it is the best all-weather precision bomber in the world. Based on the inputs of the joint and fleet commanders-in-chief, we have had to increase the requirement for the numbers of A-6Es in carrier air wings. As a result, we have a significant current shortfall of A-6 aircraft which will grow worse in the years ahead. This problem continues to be exacerbated by A-6E wing fatigue life. While all A-6Es are meeting the design specification for wing life, it had been hoped that wing life could be extended as much as 100 percent. That is not possible. We have, therefore, competed and awarded a firm fixed price contract to design, produce, and install new wings on all A-6s which are warrantied for 8,800 hours.

Funding is included in this year's budget for the continuation of the firm-fixed-price contract signed last year for the development of a completely modernized A-6F. We have just signed "production-not-to-exceed" contracts which are also in this year's budget. This aircraft will incorporate the F-404 engines, avionics and survivability features of the F/A-18, and will include a new state-of-the-art dual-mode radar. First production of the A-6F begins in FY 1988.

AV-8B HARRIER. The U.S. Marine Corps AV-8B completed both phases of its operational evaluation last March with great success. It has proven to be far superior in every mission area to the aircraft it is replacing, the A-4M and the AV-8A. Two squadrons are now operational and have completed successful training deployments. The aircraft is demonstrating a very good readiness availability. The FY 1987 budget includes funding for 42 aircraft.

P-3C ORION. The FY 1987 budget includes funding for nine P-3C maritime patrol aircraft.

CH/MH-53E SUPER STALLION. Funding is requested for 14 CH/MH-53E heavy-lift helicopters in the second year of a four-year multi-year procurement that will save $102.9 million. Four of these aircraft will be HM-53Es, the minesweeping version.

SH-60B AND SH-60F SEAHAWK. The SH-60B SEAHAWK LAMPS III helicopter received approval in 1981 for full production. The FY 1987 budget contains funding for 17 of these aircraft, and for seven SH-60F helicopters as the initial procurement of a replacement for the carrier-based SH-3 SEA KING. The SH-60F is an austere modification of the SH-60B LAMPS III helicopter. It will satisfy carrier search and rescue requirements, and its dipping sonar will meet an urgent requirement in dealing with the close-in Soviet submarine threat.

SH-2F SEASPRITE. The FY 1987 budget contains funding for six SEASPRITE helicopters. This light-weight ASW helicopter provides valuable capabilities to those ships that will not be modified to operate the heavier LAMPS III helicopters, primarily KNOX and OLIVER HAZARD PERRY-Class frigates, and will modernize the Naval Reserve.

V-22 OSPREY. The FY 1987 budget contains funding for the continued development of the V-22, formerly known as JVX. The Department of the Navy is the lead service for development and production of the OSPREY for all the services. It will replace the aging CH-46Es and CH-53A/Ds in the Navy and Marine Corps' inventory. In addition, modifications of this aircraft will be applied to many other missions in all of the services. We are including from the inception of this program the establishment of two production lines to compete annual production buys in the future.

E-6A TACAMO. Funding is requested for three E-6A aircraft in FY 1987. The TACAMO mission, now performed by EC-130 aircraft, provides a command link between the SSBN force at sea and their commanders. Replacement of the EC-130 force with the E-6A, a Boeing 707 derivative, will begin in FY 1988.

Other Aircraft. The FY 1987 budget includes funding for the final nine C-2 aircraft. The C-2 contract has been an extremely successful multi-year contract, now yielding more than $100 million in cost savings.

Marine Corps Programs

Maritime Pre-positioning Ships (MPS) Brigade Equipment. Funding is requested in FY 1987 for the third MPS Brigade and to continue equipment maintenance, modernization, and exercise funding for the first and second MPS Brigades. The second MPS squadron has replaced the Marine Corps portion of the Near-Term Pre-positioning Force (NTPF) ships , and funding continues to be required to rework NTPF supplies and equipment prior to reassignment to the third MPS squadron, to Pre-positioned War Reserve Stocks (PWR), or to the filling of unit equipment deficiencies.

Norway Pre-positioning. The Marine Corps program for pre-positioning selected equipment and supplies in Norway allows a Marine Amphibious Brigade (MAB) to move from the United States to the critical Northern flank of NATO in days, with a minimum requirement for strategic lift.

M-198 Howitzer. The FY 1987 budget contains continued funding for the M-198 to complete replacement of our towed artillery pieces with a weapon of significantly greater range, reliability, maintainability, and lethality. Ninety-four are requested in FY 1987.

Infantry Weapons Programs. The FY 1987 budget contains continued funding for the fielding of new infantry weapons, including the M16A2 service rifle and the M249 Squad Automatic Weapon (SAW), capable of engaging targets out to 800 meters with the new NATO Standard 5.56 mm cartridge.

Assault Vehicle Launched Bridge. This program will eliminate critical shortfalls in our assault river crossing capability. Eight are requested in FY 1987.

Research, Development, Testing and Evaluation (RDT&E)

The FY 1987 request for RDT&E is 10.2 percent of the Navy's total request. It represents the accomplishment of the pledge made five years ago to streamline and reduce the number of R&D programs and increase the funding where there is high payoff. We have reduced from well over 500 RDT&E programs in FY 1981 to 395 in the FY 1987 budget. A significant proportion of the entire budget is devoted to programs currently in full-scale development, including the TRIDENT II (D-5) missile, the F-14D and A-6F, and E-2C and aircraft upgrade programs. Also of significance are the continuation of the SSN-21 Combat System, the MK-50 advanced lightweight torpedo, and the MK-48 ADCAP Torpedo.

SEAWOLF (SSN-21): Continued R&D funds are required for this extremely important new submarine, designed to counter Soviet threats in the full range of expected missions far into the twenty-first century. SEAWOLF will be quieter, faster, deeper diving, more heavily armed, and more capable of under-ice operations then today's attack submarines. Authorization for the first ship is planned for 1989. A firm ceiling has been placed on the lead and follow on submarines of this class. On 10 December 1983 we approved the conceptual design and established a lead ship price at a firm ceiling of $1.6 billion in FY 85 dollars, and a firm ceiling of $1 billion for the fifth and follow on submarines. This was the successful approach used on DDG 51 and is being applied to all new ship classes.

Oceanography

Knowledge of the ocean environment is critical to tactical and strategic force employment. We are now at the threshold of a new era with the potential for offering explosive growth in our understanding of the ocean. We are taking advantage of this technological opportunity by:

(1) Reinvigorating the oceanography designator as an elite corps;

(2) Investing in more capable equipment , such as the Navy Remote Ocean Sensing System (NROSS), and in oceanographic research vessels;

(3) Establishing an Institute for Naval Oceanography to provide the means to integrate newly emerging data from satellites and other varied sources to that it can be readily disseminated to our fleet; and

(4) Increasing our educational commitment within the military and civilian oceanographic community.

We have raised substantially the number of graduate fellowships in ocean sciences for naval personnel, increased the number of academic chairs in oceanography, and strengthened the ocean sciences' technology base.

The first Secretary of the Navy Fellow in our new Master of Ocean Sciences Program was Ensign Kristine Holderied, the top Naval Academy graduate of the Class of 1984, now pursuing her studies at MIT and the Woods Hole Oceanographic Institution. The first holder of a Secretary of the Navy Research Chair in Oceanography is Dr. Robert Ballard of Woods Hole. Dr. Ballard and his team, with Navy funding, developed the ARGO/JASON Undersea Search and Exploration System that located the sunken wreck of the TITANIC last year. The TITANIC discovery was a spectacular demonstration of the ARGO submersible's capability.

Our FY 1987 commitment in the technology base has been increased by approximately 6 percent, to $122 million. The NROSS will allow us to acquire global ocean data for operational and research use by both the military and civilian sectors. Our revitalization of ocean research vessels started in FY 1985 with the procurement of two new deep-survey ships. Follow-on shipbuilding efforts are beginning this year. The Institute of Naval Oceanography will use a large-scale computer to closely link universities, research institutes and the Navy in assimilation and use of ocean data from all sources.

Command, Control, and Communications (C3)

Major investment to improve naval C3 is strongly emphasized in this budget. Anti-jam communications development and implementation is our primary thrust to achieve reliable, secure tactical communications in support of fleet operations.

In order to provide anti-jam communications to the fleet and to help achieve a common, multi-service Joint Tactical Information Distribution System (JTIDS) program, the Navy has decided to stop work on its contract for JTIDS terminal development and to restructure the FY 86-91 Navy JTIDS program to procure the Air Force TDMA terminal as soon as possible.

Space

With three-quarters of the Earth's surface covered by the seas, the Navy has always had a priority interest in the maritime dimension of space. Naval operations are increasingly dependent on space systems strategically, tactically, and in peacetime. Nearly 85 percent of all operational satellite system outputs provided to the Armed Forces are used by the Navy. The coordination of military service and civilian agency activities in space has been remarkably smooth and successful. The establishment of the Naval Space Command in 1983 and the Space and Naval Warfare Systems Command in 1985 has greatly improved the management focus of Navy efforts in space.

Reserve Programs

Five years ago the Department of the Navy undertook a major reorganization of Reserve components to move from a vertical to a horizontal relationship with the active forces. Essentially, that means that the Reserves must provide immediate augmentation to the active force in time of emergency across the entire spectrum of warfare. It means also that, in peacetime, we rely on selected reserves to provide real-time fleet support across their mission areas. To execute this common-sense policy, the Reserves must have equipment compatible with the active forces. For instance, instead of providing the Reserves only such equipment as becomes obsolete and is removed from the active force, there must be a spectrum of new and old equipment reflected in the Reserves parallel to and in the same proportion as that in the active force. We have taken fundamental steps to bring this about:

- Eleven modern OLIVER HAZARD PERRY and KNOX-Class frigates have been transferred to the Naval Reserve Force, with a total program of twenty-six frigates planned by 1990.

- The first Reserve squadron has now transitioned to the F/A-18 and and two other squadrons to the F-14A.

- Modern A-7E, E-2C, and SH-2F aircraft have or are being transferred or acquired for Reserve units this year, with other fleet aircraft to follow during the current five-year plan.

- Squadron augmentation flying units have been established and have been operating successfully with each active duty airwing, providing current-trained aviators and maintenance personnel for immediate augmentation to active duty squadrons.

The Naval Reserve contains several components which only exist in the Reserves: 100 percent of the Navy's U. S.-based logistics support squadrons; 100 percent of light-attack helicopter squadrons; 100 percent of our combat helicopter search and rescue capability; 100 percent of naval mobile inshore/undersea warfare units--the "Brown-Water Navy"--structured for combat on inland waterways. Upon mobilization, the Reserves provide 99 percent of naval control of shipping organization manning for merchant ship mobilization and convoy formation for overseas operations; 86 percent of our ocean going minesweepers; 86 percent of the cargo-handling battalions vital to port management and loading operations in combat theaters; 85 percent of Military Sealift Command military personnel; 58 percent of Naval Mobile Construction Battalions, the famed Seabees; 66 percent of Special Boat Forces; 35 percent of maritime anti-submarine warfare patrol aircraft squadrons; 34 percent of naval intelligence personnel; 21 percent of ASW helicopter squadrons needed for fleet and convoy anti-submarine defense efforts; and 14 percent of our tactical sea-based aviation capabilities.

The Marine Corps relies heavily on a fully trained and capable Reserve component to complement its active force. Upon mobilization, this reserve component provides up to 33% of the Marine Corps' wartime manpower requirements. The Reserves provide 40 percent of Marine tanks; 33 percent of the heavy artillery; 30 percent of the light attack aircraft; and 33 percent of the anti-aircraft missile capability.

It is not often realized how fully integrated our Navy and Marine Corps Reserves are becoming in our active force structure and peacetime operations. Naval Reserve C-9 transport aircraft made many trips in support of our Marines ashore in Beirut during 1983 and 1984, and provided direct support to our operations in Grenada during the same period. The Ready Reserve provided 349 volunteers for three-week tours of duty aboard the battleship NEW JERSEY during its 11-month 1984 deployment, enabling most of the crew to rotate home for leave. And for the last two years aviation squadrons aboard deployed carriers have been augmented by reservists from squadron augment units (SAUs) on voluntary temporary active duty.

A most successful new initiative begun in 1983 was the Sea/Air Mariner program that now provides 10,000 first-term enlistments per year directly into the Naval Reserve. In FY 1985 a similar program for junior officer accessions directly into the Reserves was initiated in the Navy.

The newly begun Sea/College program will target the high-quality youth market for active naval service to broaden the quality base of enlisted personnel, attract high quality recruits for non-technical ratings and provide a stable input of fleet experienced general detail non-rated enlisted personnel (GENDETS) to the Ready Reserve.

CONCLUSION

The progress outlined above and the programs proposed for the future should be a source of much pride to this Committee and to Congress as a whole. It is strong testimony to the proposition that Congress and the Executive Branch not only can work together, they can achieve dramatic results in a very short period of time. In five short years we have made a real change in the global maritime balance. We have increased available ship days 40 percent for submarines and 20 percent for surface combatants. No longer do we have a one-and-a-half-ocean Navy for a three-ocean commitment; no longer do we have ships that cannot deploy on time for lack of trained sailors; no longer do we have a hemorrhage of talent from our career forces; no longer do we have an unending spiral of cost overruns and escalations; no longer does the world perceive the United States as a declining world power. The modest 5.6 percent average increase in the Navy/Marine Corps budget for the last five years has paid enormous dividends and provided capabilities many times more than that increment.

As you consider the dilemma of deficit reduction, the Eisenhower Farewell Address that I cited earlier seems particularly relevant, if it is considered in its entirety. The "unwarranted influence" of the "Military-Industrial Complex" will remain forever the legacy of this speech, but in its opening paragraphs, the only professional soldier to reach our nation's highest office in the twentieth century set forth the challenges he saw for America in the future:

> "We face a hostile ideology--global in scope, atheistic in character, ruthless in purpose, and insidious in method. Unhappily, the danger it poses promises to be of indefinite duration. To meet it successfully, there is called for, not so much the emotional and transitory sacrifices of crisis, but rather those which enable us to carry forward steadily, surely, without complaint the burdens of a prolonged and complex struggle--with liberty the stake."

To "carry forward steadily, surely, and without complaint, the burdens of a prolonged and complex struggle..." should be the watchwords of our nation's leadership. We in the Department of the Navy have every confidence that the Congress will demonstrate the constancy of purpose required to ensure the continued strength of our Navy and Marine Corps in a complex and frequently hostile world.

Senator THURMOND. General Kelley, we would be glad to hear from you now.

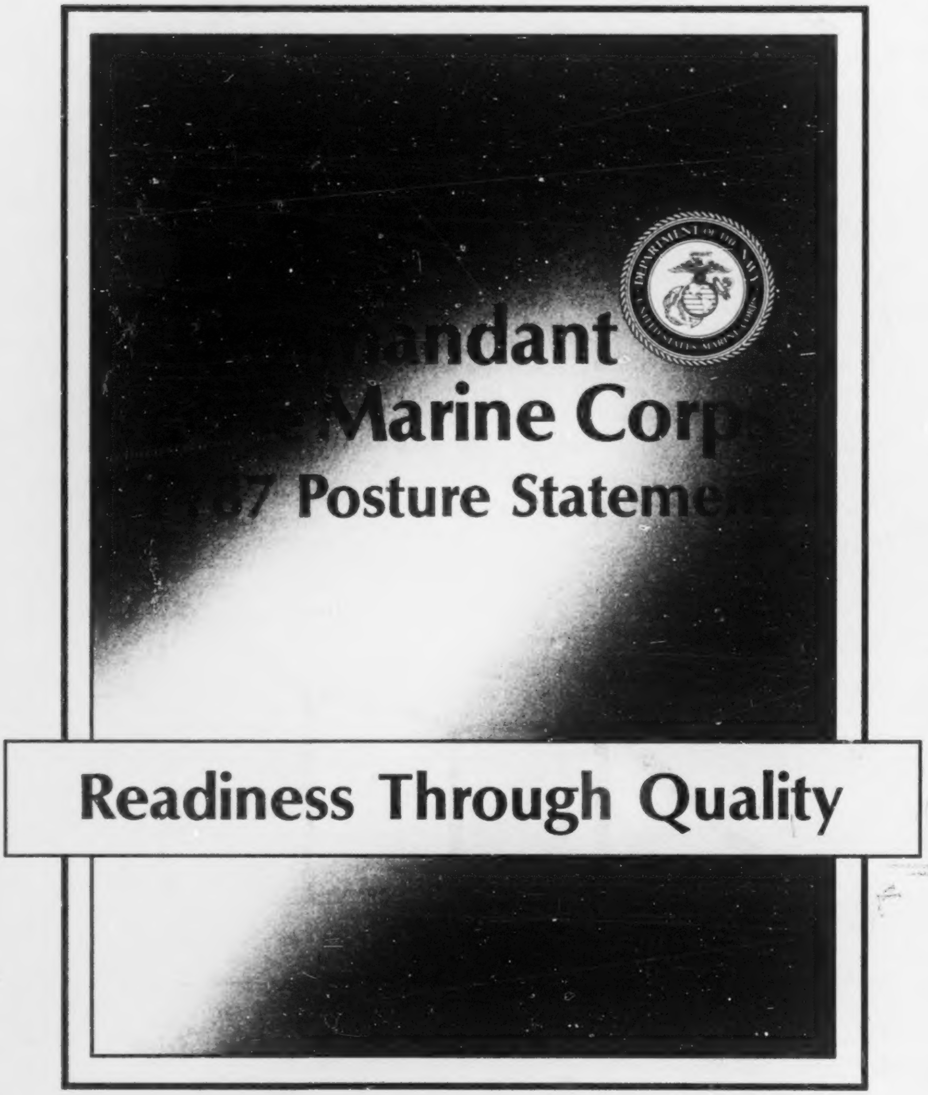
STATEMENT OF GEN. P.X. KELLEY, COMMANDANT OF THE MARINE CORPS

General KELLEY. Thank you, Mr. Chairman. I have submitted for the committee's review and consideration a formal posture statement for fiscal year 1987. I have two short verbal comments to offer, Mr. Chairman, to establish our priorities. Needless to say that within our relatively tight and austere budget everything is a priority, but there are two very important ones which I think are worthy of some recognition. The first is people. We have right now the finest quality people that this Marine Corps has had in its 210-year history. People still remain our most important product, and I ask your indulgence in supporting those programs which are people-related.

The second is the MV-22, the Osprey. This new and revolutionary aircraft represents a significant improvement in the Marine Corps' vertical assault capability, a capability which was pioneered by the corps in the late 1940's. It has my enthusiastic support as well as the enthusiastic support of the Chief of Staff of the Army, the Chief of Staff of the Air Force, and the Chief of Naval Operations.

Thank you, Mr. Chairman, and I will stand ready for any questions.

[The prepared statement of General Kelley follows:]



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Readiness Through Quality

STATEMENT BY GENERAL P. X. KELLEY, COMMANDANT OF THE MARINE CORPS, ON POSTURE, PLANS, AND PROGRAMS FOR FISCAL YEARS 1987 THROUGH 1991

1. Introduction

Mr. Chairman, members of the Committee:

It is a pleasure for me to report to you for the third time on the posture of your Marine Corps. In doing so, however, I should note at the outset that this statement does not reflect any impacts which will result from the implementation of the Gramm-Rudman-Hollings Amendment.

Thanks to strong support of the Administration and the Congress, and the unprecedented superior quality of the young men and women filling our ranks today, the Marine Corps is ready to meet any worldwide commitment. I have chosen two charts for initial use to illustrate the positive impact these elements have had on the readiness of our air-ground team.

Ground Equipment Readiness

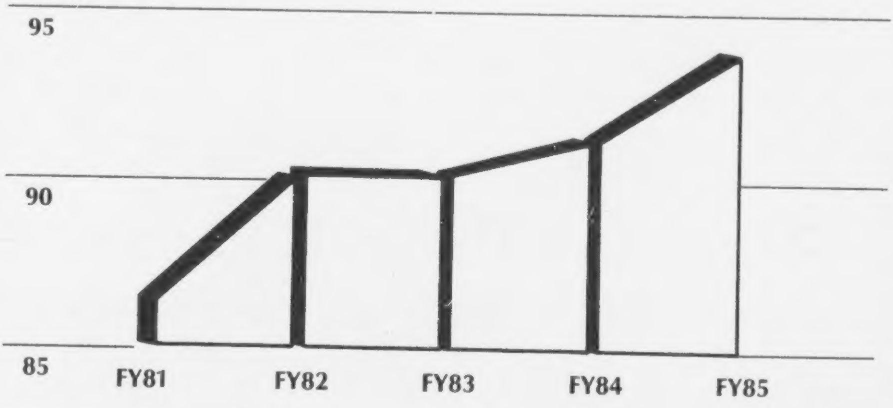
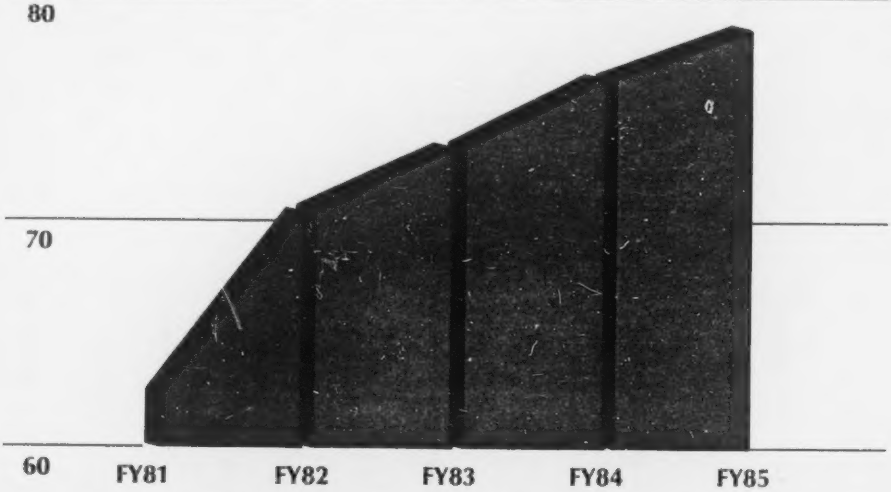


Figure 1-1

The first chart at Figure 1-1 depicts our ground equipment readiness, which is at an all-time high of 93.6 percent.

Aircraft Readiness

Percentage Mission Capable Aircraft



Percentage of aircraft which are Mission Capable are those aircraft in an operational status and capable of flying missions in support of forces.

Figure 1-2

Figure 1-2 illustrates the percentage of mission capable aircraft which are available for combat. This rate has increased by 16 percent since 1981. This increase equates to approximately 180 additional aircraft.

Readiness for combat is not unique to our Active Forces. The Reserves, under our "Total Force" policy, complement Active Forces by also providing a modernized capability to rapidly expand the Active structure with trained, combat-ready Marines.

As I stated earlier, Marine Corps readiness is built upon quality: (1) quality people--the best we have seen; (2) an improved quality of life--to enhance morale and assist in the retention of our quality people; (3) the finest weapons and equipment--to offset quantity with quality; (4) modern strategic deployment and employment assets--to ensure global responsiveness and improved reinforcement capabilities; and (5) superb training--to ensure the effective use of our forces. Each of these readiness factors will be discussed in detail.

Our past efforts and future initiatives for readiness are focused on providing our Marines the wherewithal for success in combat. These Marines remain the linchpin of success amid the glamours of technology. Without quality people, all other investments in defense would be for naught.

2. Patriotic Professionals

Today's Marines are patriotic professionals who came to the Corps eager to serve their country. The fact that these exceptional men and women are reporting to our recruit depots is a testimonial to the outstanding work of our dedicated recruiting force. Quality begets quality, as proven again through the success of our recruiting efforts in FY85.

USMC FY85 Enlisted Attainment

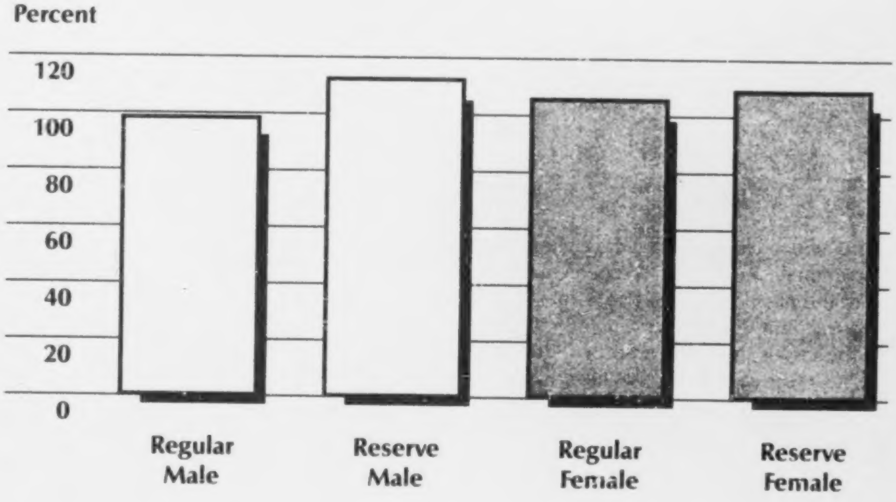


Figure 2-1

As shown in Figure 2-1, attainment of enlisted recruiting goals for FY85 nearly exceeded 100 percent in every category.

High School Graduates (% of Recruits)

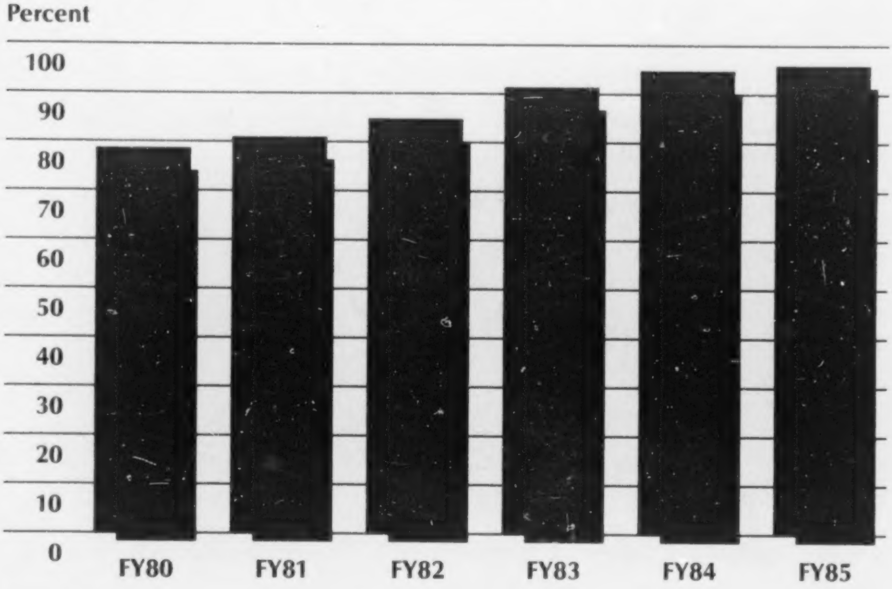


Figure 2-2

Our young volunteers are the highest qualified recruits in the Corps' history. Figure 2-2 displays the dramatic increase in the percentage of high school graduates who have joined our ranks over the past four years. The number of recruits with a high school diploma reached an unprecedented 96.8 percent in FY85. Moreover, 96 percent of these men and women scored in the upper three categories on the Armed Services Vocational Aptitude Battery (ASVAB).

These recruits join a Corps filled with professionals who continue to serve our country with distinction. The quantity of quality enlisted personnel in the force today is the highest we have experienced. Additionally, today's Marines are staying longer, doing more, and doing it more efficiently. I know, because I have seen the pride and professionalism demonstrated in my many visits to the field.

Our Marines benefit from conscientious, competent, and mature leadership, both in a distinguished body of staff noncommissioned officers (SNCO's) and an officer corps whose quality mirrors that of the force they lead. Our officers lead by example and practice a basic philosophy that says, "Marines take care of their own."

The quality of our officer corps is a direct result of selectivity in our commissioning programs, vigorous hands-on training, practical experience, and the retention of our most qualified Marines.

Annual attrition of field grade officers, for example, has dropped from 15.4 percent in 1979 to 6.3 percent in 1985. This experienced leadership is critical to readiness in today's uncertain world. The result is a more experienced, seasoned officer corps, better able to lead today's Marines.

The "continuity of command" policy which we implemented in 1984 is working well. Commanders of battalions, squadrons, and higher-level commands normally serve in these critical assignments for 24 months. This policy provides stable, experienced, and quality leadership for our Marines. Combined with an expanding Unit Deployment Program, this continuity is critical to developing a more cohesive, combat-ready fighting force. The end result, of course, is enhanced readiness.

3. Quality of Life

A high state of readiness is linked to esprit de corps, among other factors. High morale, in turn, is partially dependent upon a sound quality of life.

At the top of the quality-of-life list is pay--fair compensation for dedicated and skilled performance. Past congressional support for pay and entitlements has brought about substantial improvements, almost achieving pay comparability with the private sector for the military community through pay raises in FY81 and FY82. This relative pay comparability, however, has since been eroded. The 4 percent pay caps of the three previous years, even though offset by a 3.0 percent pay raise in FY86, has allowed **a gap between military and private sector wage levels to grow to 8.3 percent** as measured by the Employment Cost Index (ECI) (Figure 3-1). In order to maintain our quality force, it is imperative that military pay be returned to a reasonably comparable level. I ask for your help on this vital issue.

Relative Pay Comparability

Military Pay Increase Relative to ECI

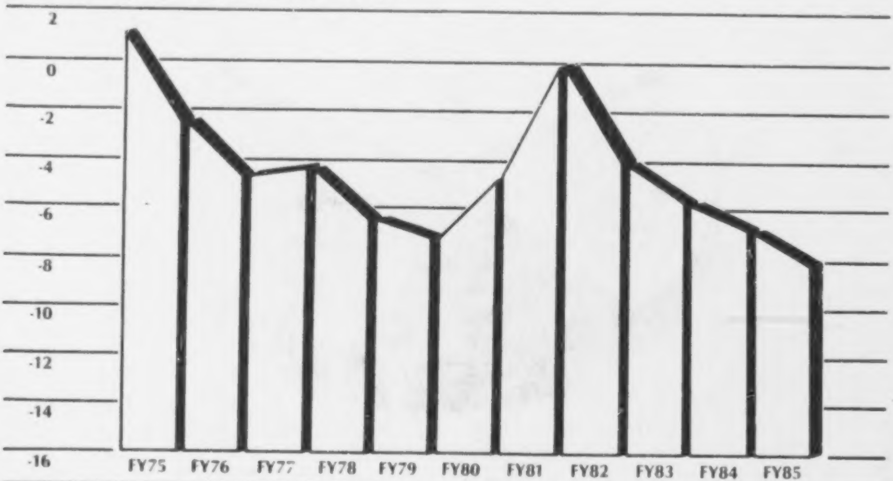


Figure 3-1

Related to pay are the allowances which are associated with maintaining a home. I seek your continued support for travel allowances and for the basic allowance for quarters (BAQ) and variable housing allowance (VHA). We greatly appreciate your efforts for improvements in these areas which relieve some of the burden our Marines and their families incur when moving into a new community.

The Military Retirement System is an integral part of the Military Compensation System. The present system is a good one. It is not overly generous as some perceive. It has served us long and well as one of our primary Active and Reserve Force management tools. Proposed changes to the present system should be carefully analyzed and weighed for the impact that they could have on the Total Force. Pay, alone, does not create or sustain the basic, wholesome lifestyle, which is necessary to support our Marines and their families.

Marine Corps Military Construction (MILCON) Distribution

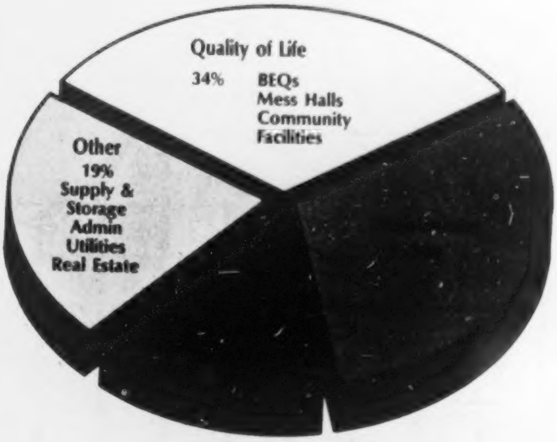
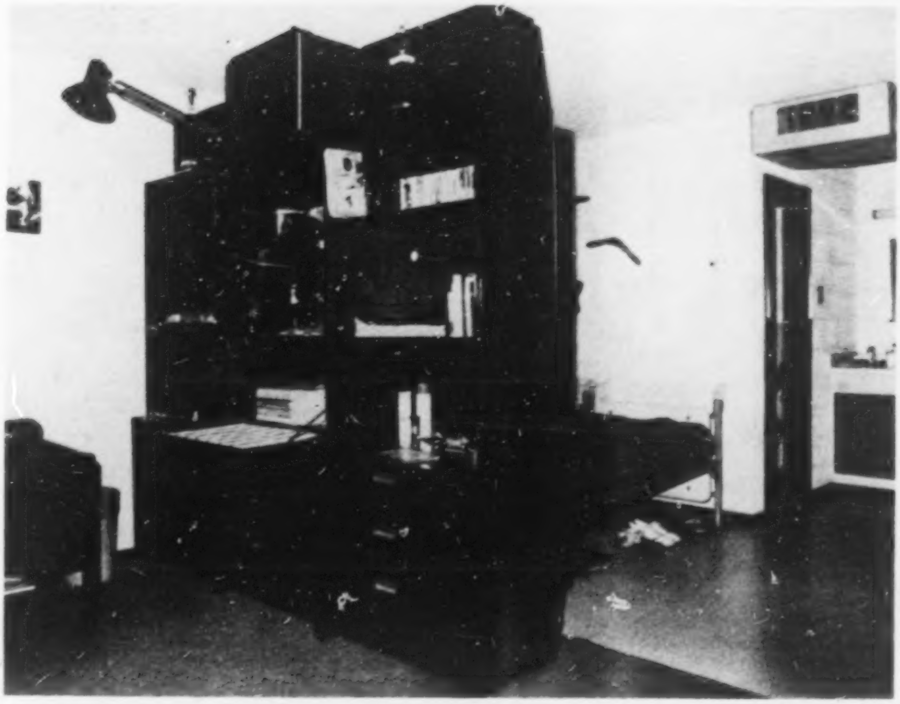


Figure 3-2

We are continuing to construct barracks at an accelerated pace in order to accommodate the need for adequate billeting spaces. Twenty-eight percent of our Military Construction (MILCON) program (Figure 3-2) this year is devoted to constructing or renovating 4,479 living spaces. We will have reduced the deficit of living spaces from 55,000 in 1980 to 34,000 by the end of FY87. The progress made thus far is excellent, but we still have a long way to go.



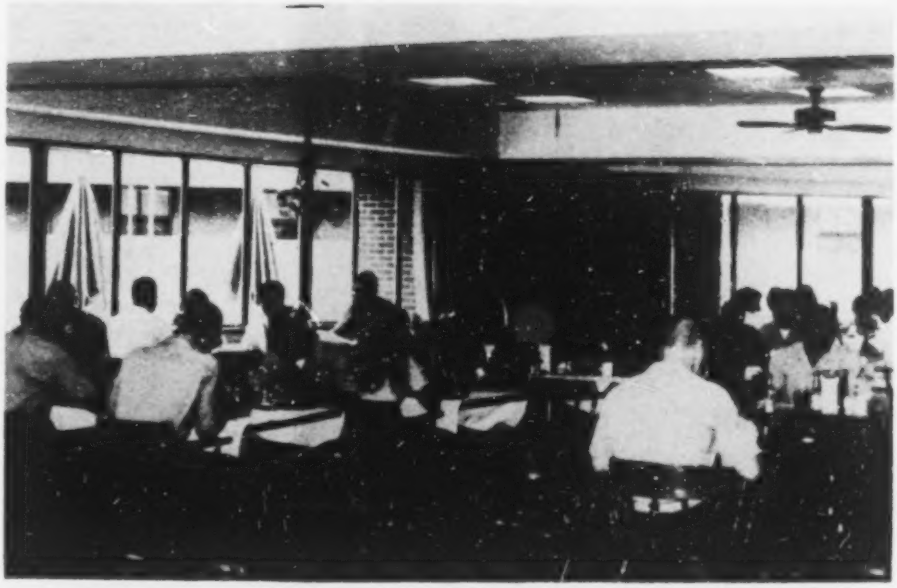
BEQ Room: Figure 3-3

Figure 3-3 is an example of the interior of a room in one of our Bachelor Enlisted Quarters (BEQ's). Another 6 percent of the MILCON Program provides other quality-of-life items such as physical fitness centers and new messhalls. An ongoing program is designed to renovate many of our messhalls (Figure 3-4). More than half of these renovations have been completed.

Critical to readiness is a sound program for countering drug and alcohol abuse. I am happy to say that great progress has been made. Marines are entitled to an environment that is free of illegal drugs. It is my goal to provide that environment.

Marines with drug or alcohol dependency are being identified, treated, and when possible restored to full duty. Those who do not respond are processed for separation. During 1985, 1551 Marines received formal treatment for substance dependency and have returned to full duty. We believe that current treatment programs, when combined with preventive education programs and policies designed to deter abuse, have significantly reduced drug and alcohol abuse in the Corps.

Families of married Marines are included in the quality-of-life calculation. Marine Corps Exchanges are offering a wide variety of goods and services to our families. Close attention to our customer needs has resulted in increased use of these facilities.



Marines Dining in a Modern Messhall: Figure 3-4

The profits from exchanges are used to supplement funds appropriated by Congress for morale, welfare, and recreation programs used by Marines and their families.

Our commissaries continue to provide a necessary service for Marine families. We have an efficient commissary system which continues to serve as a model for food store operations with its centralized distribution centers. We have concentrated our commissary construction program on the more austere locations, such as our bases at Barstow and Twentynine Palms, California.

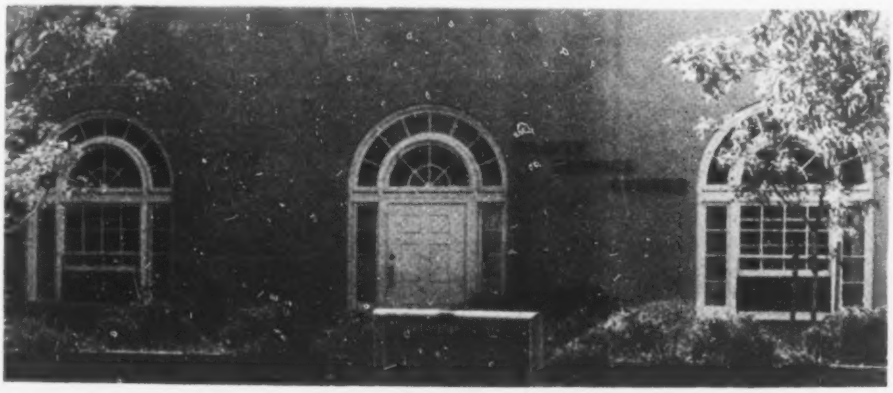
The family housing shortage in the Southern California area will decrease with the completion of 1374 units which have been approved in the last two years. I am particularly proud of the additional 632 units which we are providing for our junior Marines, lance corporals and below, at Camp Pendleton. Groundbreaking for this project took place in January 1986. Our plan to construct 300 mobile home spaces at four of our bases is essential, particularly to our enlisted Marines. This will offer a Marine that "chance" to buy a home and move it when transferred to a new location.

The Government of Japan has been constructing many new family housing units for our use at Iwakuni and on Okinawa. By 1994-96, we expect to be able to provide housing for 3,581 Marines serving in Japan who are accompanied by their families.

Additionally, we have continued to improve our existing family housing by adding patios and dishwashers. More than 8,000 homes have been rehabilitated in the last 6 years through major repair programs.

Plans are underway to complete another 5,000 whole-house rehabilitations in the next 5 years.

Health care for the entire Marine family is of great concern to me. The Surgeon General of the Navy is committed to ensuring that quality health care is available to all beneficiaries and has established a Navy-wide program to monitor and evaluate the quality of that care. Despite some recent, isolated cases, the evidence gathered by our inspection team indicates that the quality of medical care is excellent. I am pleased that dental care has been expanded to include treatment of dependents at military dental facilities on a space-available basis. The DOD Preventive Dentistry Program for dependent children has been reemphasized and upgraded to include the latest measures to control dental disease. These programs provide a limited amount of care for our families. I believe, however, that a comprehensive, government-sponsored insurance plan is needed to provide complete dental care.



San Diego Family Service Center: Figure 3-5

Family Service Centers continue to expand with the opening of our 19th center in Kansas City, Missouri last October. A photo of our San Diego Center is at Figure 3-5. These centers provide information and services to over 100,000 clients annually. Family Service Centers offer personal, family, and financial counseling; relocation information; referral and assistance; and stress-management programs. Additionally, they provide pre-and post-deployment briefings for Marines and their families; assisting commanders in maintaining unit personnel readiness by reducing unit turbulence.

Employment Resource Centers have been implemented to help spouses, separating and retiring Marines, and others to find jobs in the local community. The adverse effects of frequent moves on the careers of spouses have long been recognized, but only recently have resources been available to professionally staff and fully automate a program to reduce unemployment problems. Plans call for 16 Employment Resource Centers to be operational at our major commands by 1 October 1987.

The frequency of the moves mentioned above remains a constant concern. By reducing this frequency, we can decrease cost and improve the quality of life for Marines and their families.

Permanent Change of Station (PCS) moves are limited to those necessary for manpower readiness in our operating forces and for the equalization of hardship duty. To this end, the Marine Corps strives to reduce dependent-restricted overseas tours by expanding the Unit Deployment Program, where possible, and increasing the number of Marines sent overseas with their families under the Accompanied Tours Program. Tour lengths must remain realistic for Marines who serve without their families overseas because of operational commitments. Tours must be long enough to meet operational needs, but not so long as to create further hardships for these separated families. Cost, alone, must not be the principal factor in establishing the tour lengths for Marines serving overseas without their dependents.

Overall, our Marines and their families are experiencing an enriched quality of life due, in large measure, to these congressionally-approved programs.

4. Weapons, Equipment and Logistics

In 1978, the Commandant had to decide if he wanted to retain readiness as a priority at the expense of a strength reduction of 10,000 Marines. No meaningful modernization program for air or ground equipment was possible at that time.

In recent years, thanks to your support, we have enjoyed an entirely different situation. Rather than decrease our strength by 10,000 Marines from the 1978 level of 188,000, we are now at 198,300. We remain ready, and we are modernizing. For example, we plan to replace every single weapon system within the Marine division--from the pistol to the main battle tank-- in a decade. Every aircraft in our inventory is either being replaced or upgraded. In terms of sustainability, we are in the best condition we have ever been. When you compare the Corps of the mid-to-late 70's with the Corps of today, it is similar to comparing apples with oranges. The reason for such a significant change is simple: the administration's support and congressional backing. With the ever-increasing probability of facing a quantitatively superior foe, we must continue to focus on quality, because future budgets will likely provide less funding for increases in personnel or equipment and supplies.

Quality must permeate all aspects of our Corps. As I stated earlier, the quality of the individual Marine is the preeminent consideration in the overall quality equation. These Marines must be provided the finest weapons and equipment, and be supported by the best-managed logistics that we can afford.

Since the infantry is the cutting edge of amphibious forces, it will be covered first, followed by improvement efforts for supporting ground, aviation, and logistic elements.

Infantry Enhancements

Increased Sustainability	• **Return to 13-Man Rifle Squad**
Improved Small Arms	• **Shoulder-Launched Multipurpose Assault Weapon (SMAW); procurement FY84-89 (Fielded FY84)** • **Squad Automatic Weapon (SAW); procurement FY82-87 (IOC FY84)** • **M16 Product Improvement Program (PIP) M16A2; procurement FY82-89 (IOC FY84)**

Figure 4-1: continued on page 20

Infantry Enhancements (continued)

Improved Small Arms	**• 9mm Pistol** **–Beretta M92SBF, 9mm Pistol** **–Replaces the current .38 and .45 caliber pistols** **• M60E3 7.62mm MG PIP; procurement FY84-85 (IOC FY86) fielded CY86** **• MK19 40mm Grenade Launcher; procurement FY82-89 (IOC FY86)**
Mortar Enhancements	**• I81mm--procurement FY85, 87, and 88 (IOC w/LAV FY86, IOC w/other FMF units FY89)**

Figure 4-1

We are in the process of returning to the 13-man squad from an 11-man squad. The 13-man squad served the Corps well for almost 40 years and provides far more maneuverability, flexibility, and sustainability at the small unit level. Figure 4-1 illustrates the dramatic modernization that is taking place in our infantry battalions.

Artillery Modernization

Conversion to M198, 155mm Towed Howitzer	**• New structure transition began in FY83** **• 433 howitzers delivered through FY85** **• 144 howitzers programmed FY86-87**
M109A3, 155mm Self-Propelled Howitzer	**• Currently have 6 batteries** **• 3 additional batteries to be fielded by FY89**
Target Acquisition Battery (TAB)	**• One TAB each in FY85, FY87, and FY88** **• AN/TPQ-36 Fire Finder Radar fielded FY85. Remaining systems to be fielded FY86**
Precision Guided Projectiles	**• Modular Universal Laser Equipment (MULE) to begin fielding FY86** **• 155mm Copperhead**
Battery Computer System	**• To be fielded FY87**
Meteorological Data System	**• To be fielded FY87**
Position Azimuth Determination System	**• Commenced fielding**

Figure 4-2

The modernization of Marine Corps artillery is continuing as scheduled (Figure 4-2). One artillery battalion in the Reserve Forces was equipped with the M198 during FY85, and the remaining towed battalions will be equipped during FY88/89. Additional self-propelled, 155mm batteries will be activated during the period FY87-89 to improve our general support capability through improved mobility and survivability.

Our target acquisition capability has also been enhanced by fielding the AN/TPQ-36 counter-fire radars within CONUS artillery regiments. The remaining Active Forces will be equipped with the AN/TPQ-36 this fiscal year, and the Reserve Forces will receive it during FY87.

As indicated in Figure 4-2, the Marine Corps has procured the Army's Battery Computer System, Meteorological Data System, and Position Azimuth Determination System, which allow continued joint training and logistical support, as well as providing improved responsiveness and accuracy of artillery fires. Most importantly, commonality means mutual support.

M1A1 Tank: Figure 4-3
U.S. Army Photograph

This commonality is also extended to our armor enhancements. Our current main battle tank, the M60A1, will begin reaching the end of its service life in the late 1980's. After an extensive evaluation of potential replacements, the M1A1 120mm tank (Figure 4-3) was selected. M1A1's are planned to begin entering the inventory in FY90.

Antiarmor Enhancements

Tube-Launched Optically-Tracked, Wire Guided Missile (TOW)	• Phase i TOW Procurement Complete • New 5" TOW warhead and extended range to 3750m • Phase II procurement began FY81; 6" TOW warhead, extended range and electrical optical counter-measures (EOCM) (IOC FY84) • Night sights--144 per division; procurement FY79-87 (IOC FY84)
Tanks	• M60A1--end of service life late 1980's • FY88 funds planned for replacement of M60A1 with M1A1 • Enhanced lethality, mobility, and survivability
Air Delivered	• Modern armor threat necessitates air-delivered antiarmor weapons which offer increased aircraft survivability and target lethality • Near-term, state-of-the-art, antiarmor weapons being pursued for both fixed wing and helicopters • Laser Maverick--fixed wing Precision Guided Munition (PGM) (IOC FY85) • Hellfire--helicopter PGM (IOC FY86) • GATOR--area/area denial weapon (IOC FY85) • 25mm multipurpose gun for the AV-8B (IOC FY85)
Light Antiarmor Weapons	• AT4 –Procure in FY86-91 to replace M72A2 LAW –Improved accuracy and penetration –9mm training device improves all aspects of training • Dragon PIP –Greater penetration warhead (IOC FY88) –Faster, longer range missile with improved day/night tracker (IOC FY90)

Figure 4-4

The ability to engage and defeat heavy and light threat armor has also been improved with the addition of some new weapons and improved ammunition (see Figure 4-4). The AT4 has been selected as a replacement for the M72A2 LAW, and the Shoulder-launched Multipurpose Assault Weapon (SMAW), now capable of defeating light armor, will soon be capable of defeating armor up to and including the Soviet T72 tank. Additionally, 40mm and .50 caliber improved munitions now give us the capability to defeat light armored vehicles. The TOW 2, with its greater range and improved penetration, coupled with the planned product improved Dragon (IOC 90) with increased range, penetration, and improved tracker, complete the array of antiarmor weapons. To improve our night fighting capability, we have fielded a full spectrum of night vision sights and goggles to complement these new weapons.

Our naval surface fire support (NSFS) capability is being dramatically improved with the return of all four IOWA-Class battleships. The third, the USS MISSOURI, is scheduled for recommissioning this summer. Reactivation of the USS WISCONSIN is scheduled for FY86.

These battleships' large caliber guns provide a legitimate sense of security for Marines. They are also complementary to landing force artillery after it is established ashore. The introduction of the 5" Semiactive Laser Guided Projectile, plus the development of the improved 16-inch ammunition, will provide the best NSFS that we have enjoyed for some time. Progress in NSFS must continue. In the future, we hope to launch our Marines from over-the-horizon onto beaches and further inland. Adequate range in NSFS is required to support the assault of helicopters and air-cushion craft. These capabilities may generate a need for some NSFS systems with ranges of 60 nautical miles.

A related Navy-Marine Corps program will procure a short-range remotely piloted vehicle (RPV). The program will provide an operational capability in FY87. It will also be used to evaluate RPV tactics and employment concepts for target acquisition, battlefield surveillance, artillery and naval surface fire support, and communications relay roles.

Aviation Enhancements

AV-8B	**• Highly successful operation evaluation completed; enthusiastically recommended for full production • Features: –Basing flexibility increases close air support (CAS) responsiveness –Lethality improved with onboard ordnance delivery system –Effectiveness enhanced with increased payload • Night-attack capable**
F/A-18	**• Night-attack capable • More efficient/capable MAGTF support**
Night Attack	**• Regains night for warfighting • Allows medium to high threat operations during darkness –Night vision goggles enable maneuvers close to ground –Navigation FLIR provides terrain identification –Moving map display reduces disorientation –Rasterized HUD allows out-of-cockpit operation –AV-8B leader; F/A-18 and A-6F to follow**
A-6F	**• Significant improvement to reliability, maintainability, and survivability –Enhanced radar accommodates beyond-visual-range weapons –New avionics/engines provide greater reliability and commonality –Design features to reduce maintenance manhours • Ensures vital deep strike medium-attack and all-weather CAS capability**
Tactical Air Operations Module (TAOM)	**• Replaces unsupportable 1960's equipment • Reduces number of personnel and support equipment • Enables tailoring of capability to size and complexity of operation • Provides reliable, deployable, employable command and control**

Figure 4-5

A major segment of our Marine combined-arms firepower is resident in our aviation forces. Today, Marine aviation is far better prepared than ever before to provide vital support to our ground combat forces (Figure 4-5).

AV-8B Harrier: Figure 4-6

Strong congressional support for the AV-8B Harrier (Figure 4-6) is greatly appreciated. Today, we are rapidly converting our light-attack force to the AV-8B. Our first two tactical squadrons are now operational. One more will commence transition in March with an additional one following in FY87. This will complete the transition of our existing Harrier pilot base. The Vertical Short Take Off Landing (V/STOL) trainer, TAV-8B, is scheduled to arrive in time to transition our conventional, A-4, light-attack aircrews to this new AV-8.

The extraordinarily successful introduction of the F/A-18 continues. Today, there are four strike fighter (VMFA) squadrons operational with two more to be phased in during 1986. The tremendous fighter/attack flexibility of the single-seat F/A-18 has provided an opportunity to expand the roles assigned to a single airframe, and is manifested in the planned reorganization of the VMFA squadron. Reorganization is further driven by the growth potential inherent with the two-seat F/A-18. With two essentially common airframes, the Marine Corps will incorporate the Tactical Air Coordinator (airborne), the Forward Air Controller (airborne), and the reconnaissance capability, as well as an austere all-weather capability into every squadron. The overall effect is a reduction in personnel and a reduced logistical support requirement. Of primary importance, however, is the fact that a more efficient and capable aviation combat organization will be supporting our forces. The F/A-18 and the AV-8B share in another program aimed at improving their already impressive capabilities.

With the support of the Congress, the Night Attack Program was initiated as a low-cost, night enhancement. The night attack system enables the pilot to operate at night using daylight tactics associated with medium-to-high threat operations. The cockpit is compatible with night-vision goggles (NVG) and is provided with forward-looking infrared radar (FLIR), and a moving-map display which reduces the potential for disorientation common to low altitude and reduced visibility operations. The AV-8B is the leader in this development program with the F/A-18 and A-6F to follow. For the AV-8B, procurement is to commence in FY87, while F/A-18 procurement begins in FY88. Night attack offers the opportunity to use the cloak of darkness to increase aircraft survivability while overcoming obstacles associated with night operations. The capability to operate in adverse weather is improving as well.

The A-6F provides significant improvement to the existing A-6E by increasing reliability, maintainability, and survivability. New engines and avionics will provide greater reliability and commonality with other fleet aircraft. Design features have also been incorporated to reduce maintenance man-hours. Finally, survivability is enhanced with increased weapons standoff, reduced systems vulnerability, and improved electronic countermeasures. The A-6F ensures that the vital deep strike medium-attack and all-weather capabilities are unparalleled.

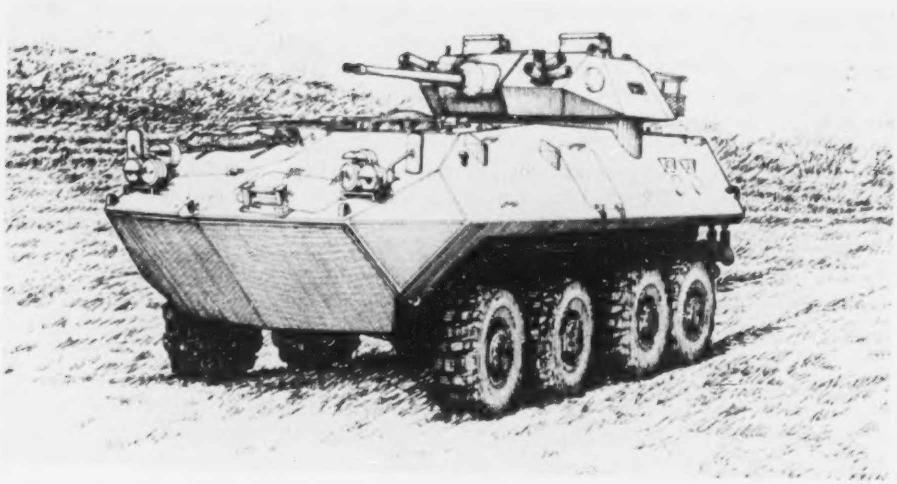
Modernization of Reserve aviation continues to be a priority. Although aircraft released from the Active Forces are immediately placed in the Marine Corps Reserve inventory, this does not satisfy long-term requirements. While these aircraft remain capable, our aviation acquisition plans address continued modernization. We request continued congressional support in these efforts.

Ground Tactical Mobility Enhancements

Assault Amphibian Vehicle (AAV7A1)	• **Service life extension program began 1982** • **Extends use through the 1990's** • **New engine, nonintegral fuel tank, all electric weapons stations** • **327 new AAV's for MPS**
Light Armored Vehicle (LAV)	• **Lightweight, flexible, agile fighting vehicle** • **Firepower-intensive organization 110 LAV's per LAV battalion** • **Helicopter transportable** • **Enhances strategic transportability**
Armored Vehicle Launched Bridge (AVLB)	• **Eliminates critical shortfall in assault gap crossing capability** • **Organic to Tank Battalion** • **Capable of pacing with Armor and AAV Units**

Figure 4-7

Our tactical mobility, both ground and air, remains vital. We have increased the capability of our assault amphibians and extended their useful life. We have also embarked on a product improvement program that will further enhance the firepower, mobility, and survivability of the AAV7A1 (Figure 4-7). This product improvement program will enable the AAV7A1 to meet all its operational demands until the follow-on vehicle, the Advanced Assault Amphibian Vehicle (AAAV), is fielded in the late 1990's.



LAV: Figure 4-8

The Light Armored Vehicle (LAV) program is fully underway with the LAV-25 (Figure 4-8) and the Mission Role Vehicles (MRV's) currently being delivered. The MRV's use a common baseline chassis with multiple configurations; e.g., antitank, mortar, recovery, logistics, and command and control. This family of vehicles reduces training and support requirements and improves combat interoperability.

HMMWV: Figure 4-9

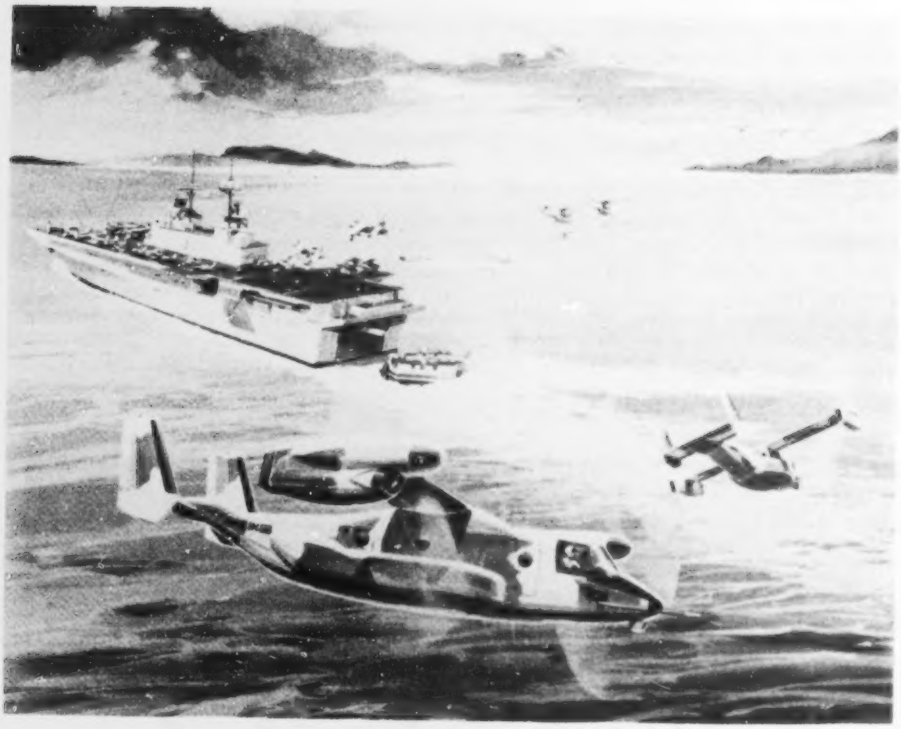
Our tactical motor transport program consists of light, medium, and heavy-vehicle fleets. The light vehicle fleet consists of the Commercial Utility Cargo Vehicle (CUCV) and High Mobility Multipurpose Wheeled Vehicle (HMMWV) (Figure 4-9). The CUCV is a commercial 5/4-ton vehicle that replaces the obsolete M880 truck; fielding will be completed in FY86. The HMMWV--a multipurpose vehicle-- has a 5/4-ton capacity and will replace the jeep, Mule, Gamma Goat, and light trailers. Initial Production Test results of the HMMWV have shown that it is far superior to any vehicle in our light-vehicle fleet in regards to reliability, availability, maintainability, and durability. Minor deficiencies were identified, but are being rectified at no cost to the Government.

The medium-vehicle fleet consists of the M939, product-improved, 5-ton truck series. The general purpose use of special containers of modules for fuel and water will reduce our need for special-purpose vehicles. Again, we are seeking fewer systems which have multiple capabilities.

The heavy-vehicle fleet, consisting of a 16-ton tractor and four, rear-body variants, will replace the current 20-ton tractors and a large quantity of 5-ton tractors and trailers.

Landing Craft, Air-Cushion (LCAC): Figure 4-10

One of the Navy's most significant programs for ship-to-shore tactical mobility is the Landing Craft, Air-Cushion (LCAC) (Figure 4-10). The LCAC will dramatically increase our amphibious assault by providing us with a true over-the-horizon launch capability. The LCAC's have only begun to enter the fleet, and we will need at least 90 for a meaningful capability. We look forward to the introduction of the first detachment at Camp Pendleton, California, later this year.



OSPREY: Figure 4-11

The tactical mobility of the MV-22 Osprey (Figure 4-11) complements ground tactical mobility. We have made tremendous progress on this tiltrotor aircraft development during the past two years. Our preliminary design phase has been highly successful. Over 6,000 hours of wind tunnel work and extensive design evaluations have allowed us to proceed with full-scale development of a highly-refined and cost-effective design. I fully expect the Osprey to meet our urgent operational requirements when it begins replacing the aging CH-46's in 1991. The unique aspects of tiltrotor technology combine the inherent features of both turboprop and helicopter. The MV-22 is self-deployable with an unrefueled range of 2,100 nm; responsive at airspeeds in excess of 250 knots; potent by virtue of the 24 combat-loaded Marines or 10,000 pounds of cargo it transports; and flexible due to the variety of basing options and environments in which it may be employed. The promise offered by our performance estimates convinces me that we will gain exactly what we need to meet our force projection requirements in the 1990's and beyond.

Supporting the medium-lift of the MV-22 is the CH-53E, the most powerful helicopter in the free world. The continued procurement of the CH-53E Sea Stallion is essential to maintaining a heavy-lift capability in the future. The CH-53E provides lift for heavy weapons and equipment in the amphibious assault to include the M198 Howitzer and the LAV. Additionally, the Sea Stallion can retrieve every aircraft in the tactical and assault inventory, including another CH-53E. During the past year, the CH-53E has demonstrated its coast-to-coast aerial refueling flight capability. In light of the pre-positioning airlift constraints, the air-to-air refueling and self-deployable CH-53E is considered essential to the success of those operations.

Our support units are equally critical in our attainment and maintenance of readiness. Quality engineer, maintenance, and medical support are essential to our amphibious force projection capability.

Combat engineers are presently capable of laying and clearing mine fields, as well as emplacing and breaching obstacles.

Combat Engineer Enhancements

Improved Counter Mine

- **M58 Trailer Mounted Line Charge System--assault minefield breaching capability for Tank and Engineer Bn's (IOC FY87)**
- **M59 Mine Clearance System Kit--assault mine breach from surf zone and inland for AAV Bn's (IOC FY87)**
- **Portable Mine Neutralization System (POMINS)--will provide anti-personnel land mine and wire obstacle clearance. Replaces bangalore torpedo.**
- **Cleared Lane Marking System (CLAMS)--provides mine breach marking system for armor, LAV, and AAV**
- **Vehicle Magnetic Signature Duplicator (VEMASID)--projects a magnetic field causing magnetic mine fuse logic to activate and harmlessly detonate mines**
- **Conventional Mine Laying System (CMLS)--will provide rapid emplacement of current M15 anti-tank mines**

Figure 4-12

Five initiatives (Figure 4-12) are underway to provide the combat engineer with a rapid means of neutralizing enemy minefields. A sixth system is a rapid minefield emplacement system, expanding the ability of the combat engineers to support ground forces.

Maintenance programs, warehousing, training, and administrative facilities have improved. This year's military construction and real property maintenance funds will provide support for major weapons systems such as the F/A-18, AV-8B, and the CH-53E. They will also provide ordnance facilities, improved gunnery ranges, new electronics maintenance facilities, new administrative buildings, and fire protection programs.

Medical support for committed Marines will be provided by a Rapidly Deployable Medical Facility (RDMF) until it is replaced in 1987 by the first Combat Zone Fleet Hospital specifically designed and equipped to render immediate care to casualties. The Navy will have 23 of these modular field hospitals ranging in size from 250 to 1,000 beds. The hospitals can be employed independently or in multiples as operational requirements demand. Each module is equipped for surgically intense casualty flow and is self-sustaining for 30 days. Two 250-bed hospitals will be loaded aboard ship as part of the Maritime Pre-positioning Ships (MPS) program in support of our forces while the remainder, as part of the overall continuum of care for medical support, are programmed for physical placement in CONUS or overseas within the supported commander's area of responsibility.

Additional combat service support enhancements not previously mentioned are listed in Figure 4-13.

Combat Service Support Enhancements

Logistics Vehicle System (LVS)	**• One front power unit and four interchangeable rear body units; container hauler, wrecker, dropside cargo with crane, 5th wheel** **• Off-road mobility** **• 60" fording capability without kit** **• Common chassis/drive train** **• All diesel fleet** **• Multiuse rear body variants** **• Air transportable in C-141, C5, and C-17 (prototype) aircraft** **• IOC during FY86**
Reverse Osmosis Water Purification Unit	**• Replaces all existing water purification equipment** **• Produces potable water from salt, brackish, and fresh sources** **• Can purify NBC contaminated water**
Field Logistics System (FLS)	**• Exploits the benefits of containerization** **• Compatible with international dimensional standards** **• Reduces maintenance and training requirements due to commonality of equipment** **• Improves strategic mobility and sustainability**
Ribbon Bridge	**• Nondevelopment item in service w/U.S. Army for 10 years** **• Military Load Class 70** **• Rapidly Employable** **• 276 ft per bridge platoon** **• No support equipment required** **• LVS provides transport capability MK48/19 (Multipurpose)**

Figure 4-13

New weapons and equipment are being introduced into Reserve as well as Active units. These horizontal integrations are depicted in Figure 4-14.

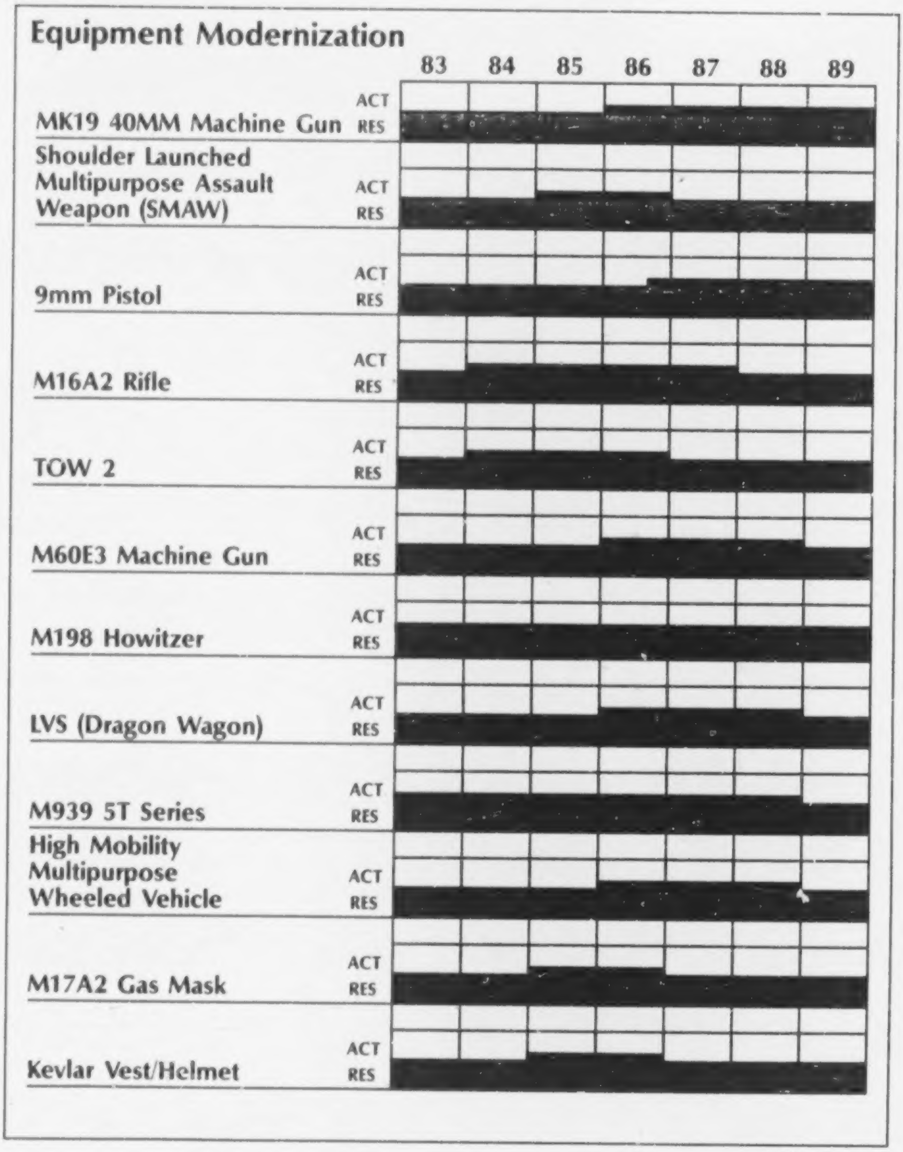

Equipment Modernization
83
84
85
86
87
88
89
MK19 40MM Machine Gun
ACT
RES
Shoulder Launched Multipurpose Assault Weapon (SMAW)
ACT
RES
9mm Pistol
ACT
RES
M16A2 Rifle
ACT
RES
TOW 2
ACT
RES
M60E3 Machine Gun
ACT
RES
M198 Howitzer
ACT
RES
LVS (Dragon Wagon)
ACT
RES
M939 5T Series
ACT
RES
High Mobility Multipurpose Wheeled Vehicle
ACT
RES
M17A2 Gas Mask
ACT
RES
Kevlar Vest/Helmet
ACT
RES

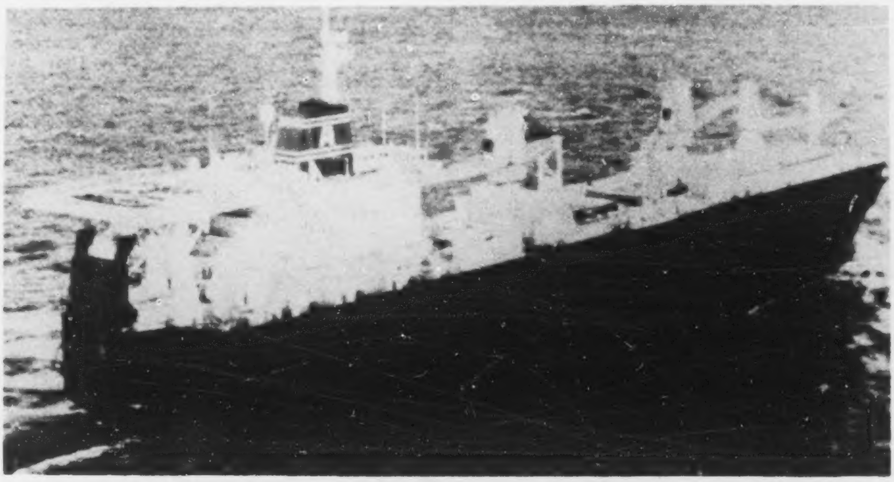
Figure 4-14

In all of our programs, we are maintaining vigilance over our procurement systems to ensure that maximum value is received for each dollar spent. I have charged both requirements and contracting personnel to be certain that we buy only what we need and that we pay a fair price. Systems have been implemented to challenge questionable prices and to report any suspected violations. We have ensured that everyone who is associated with procurement fully understands our procedures and practices. We want the taxpayers to know that we are spending their tax monies judiciously and that we are getting the "biggest bang for their buck." We simply do not tolerate waste, fraud, or abuse!

5. Strategic Deployment and Tactical Employment Assets

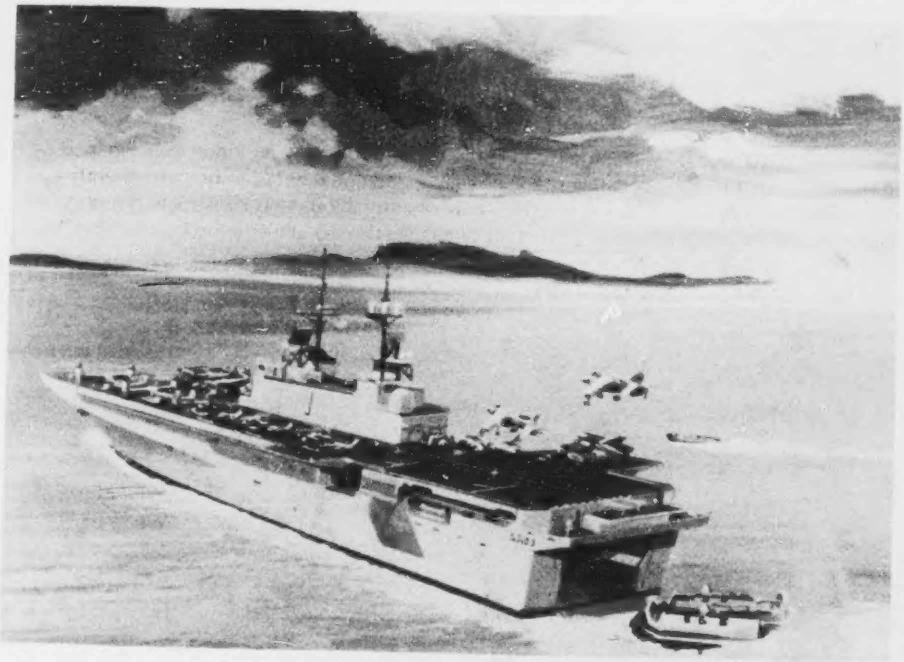
The effective employment of Marines depends upon timeliness as well as readiness. The foundation of this timeliness is seen in our strategic deployment assets. Once Marines are deployed, the finest tactical employment assets become the basis for timeliness and success.

I understand that our crisis response and reinforcement roles will continue to be shaped by the realization that funding constraints will not allow additional forces to be permanently stationed overseas, nor will we see a massive influx of amphibious ship construction money to simultaneously lift more than our current lift objective--the assault echelon of a Marine Amphibious Force (MAF) and a Marine Amphibious Brigade (MAB). The size and composition of these task forces will be discussed later.



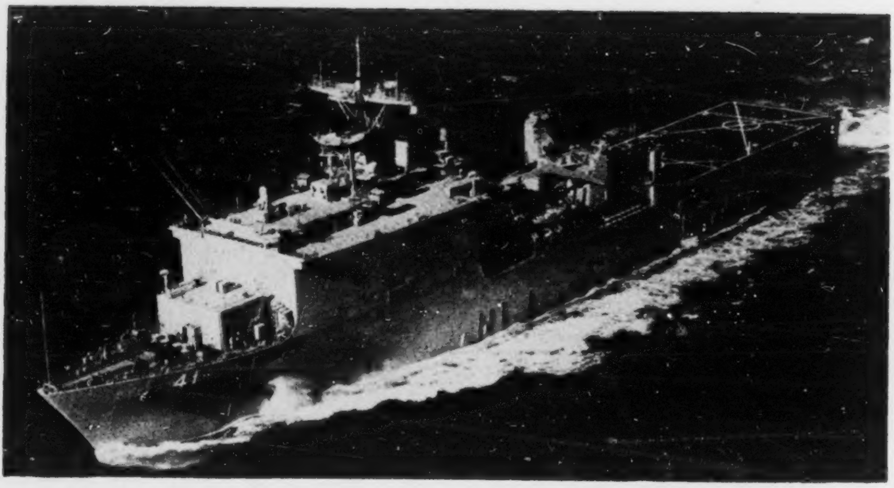
MV 2ND LT. JOHN P. BOBO (MPS): Figure 5-1

The Navy-Marine Corps Team has, however, made significant progress since 1980 with programs designed to enhance the Nation's force projection capability. While we have continued to focus on amphibious force projection, other programs--such as Norway and Maritime prepositioning--have served to supplement, complement, and enhance our role in the national military strategy. Figure 5-1 illustrates one of our Maritime Pre-positioning Ships (MPS).



USS WASP: Figure 5-2

In the vital area of amphibious lift, the Congress has authorized the procurement of two WASP-Class LHD's (Figure 5-2)--the keystone of our lift program--and eight WHIDBEY ISLAND-Class LSD's, critical to our lift of the LCAC. Three more WASP-Class LHD's and three of the LSD Cargo Variants have been programmed in the President's budget. Of these 16 ships authorized or programmed since 1980, only two of the WHIDBEY ISLAND-Class LSD's (Figure 5-3), WHIDBEY ISLAND and GERMANTOWN, have joined the fleet. Although we are making progress toward meeting our lift objective, our rate of progress is slowing and it will now be the late 1990's before our lift requirements are met. **Further slippage in amphibious ship programs would seriously threaten this goal as older ships begin to retire at the turn of the century at a rate much faster than they can be replaced.** Accordingly, the Marine Corps strongly supports the service life extension program (SLEP) of the AUSTIN-Class LPD's. This critical program will provide an additional 10 years of service life to this highly capable class of ships.



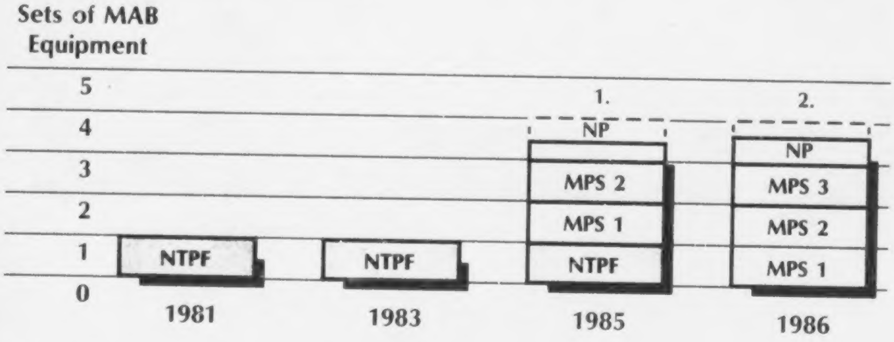
USS WHIDBEY ISLAND: Figure 5-3

It is anticipated that large-scale amphibious operations in a high intensity combat environment will produce a significant number of casualties requiring immediate treatment and surgery. Therefore, the maximum medical capabilities of an Amphibious Task Force must be realized early in the engagement. Since various amphibious ships with medical facilities aboard may be required to leave the Amphibious Objective Area (AOA) as the Marine medical units are established ashore, there is an urgent requirement for a hospital ship program which provides a flexible dimension to combat casualty care. The two SAN CLEMENTE-class tankers TAH (Figure 5-4) being converted to hospital ships with 1,000 beds and 12 operating rooms each will be deployed to support the global mission of our Corps. Initial operating capability is scheduled for FY87.

USNS MERCY: Figure 5-4

An associated ship-building initiative is found in the Aviation Logistic Support Ship (TAVB) program. With either of two TAVB ships available, the aviation combat element (ACE) of any Amphibious Task Force will be provided more rapid intermediate-maintenance support upon arrival of the ships in the AOA. The TAVB provides this vital support for both helicopters and fixed-wing aircraft in the theater of operations. This seaborne-maintenance capability permits early introduction of landing force aviation which can expedite the early release of carrier battle groups to other sea control or force projection missions, if needed. These two ships will be delivered this year.

Pre-positioning Capability



NOTES:

1. **NP = Norway Prepositioning which is approximately 45% funded with final IOC by 1989.**
2. **In December 1985, the Marine Corps portion of the NTPF was disestablished and during mid-1986 MPS-3 will be formed. MPS is an improvement over the previous NTPF.**

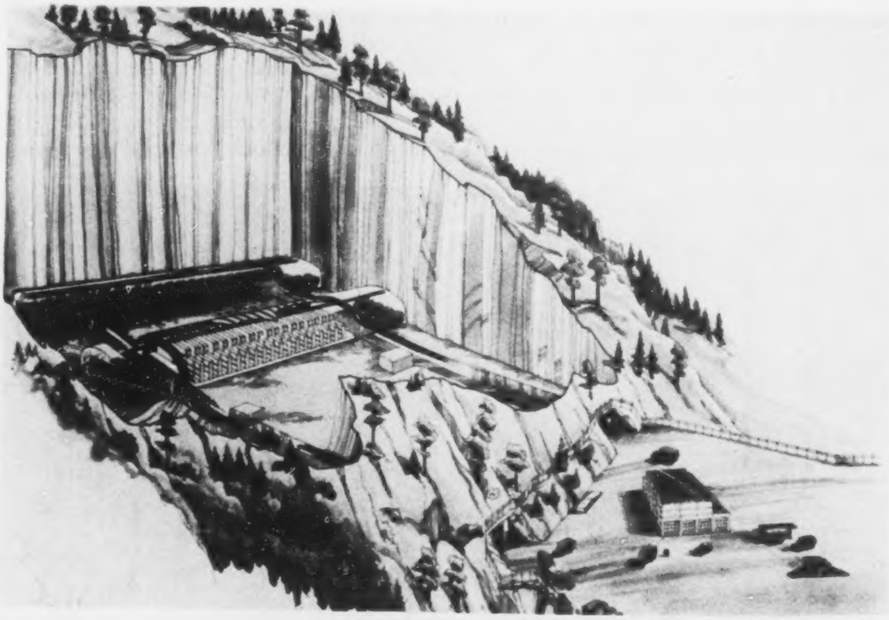
Figure 5-5

The Maritime Pre-positioning Ships (MPS) Program mentioned earlier is a model success story, and I could not be more pleased (Figure 5-5).

The first MPS squadron, fully loaded with the combat equipment and 30 days of all classes of supply for a 16,500-man Marine Amphibious Brigade, deployed on 30 July 1984. Its area of operations is the Eastern Atlantic. The MPS concept was exercised during BRIGHT STAR-85 in Egypt last August, and I have heard nothing but the highest praise from the participants. The second MPS Squadron deployed in phases, and replaced the Marine Corps portion of the Near-Term Pre-positioning Force in Diego Garcia during December 1985. The third MPS Squadron will deploy to Guam and Tinian by the end of September 1986. In summary, MPS is on schedule and proving to be an extremely valuable strategic capability.

Another strategic mobility enhancement is our pre-positioning of selected equipment and supplies in Norway. This program will reduce our response time to the critical northern flank of NATO from weeks to days. The Norway force, a MAB-sized Marine Air-Ground Task Force, is a totally integrated air-ground team under a single commander with a sustainability package specifically tailored for cold-weather operations. It is a versatile, formidable force of approximately 13,000 Marines and sailors and over 150 aircraft. Because each MAB is task organized to accomplish the mission assigned, the Norway MAB has been tailored to the unique requirements of the Norway mission and, consequently, is different from the previously mentioned MPS MAB. The Norway pre-positioning program has been designed to provide rapid deployment to an area vital to the United States and her NATO allies and offers a highly credible alternative in measured response and deterrence. The program itself sends a clear signal of U.S. commitment and resolve without being provocative, and does not require the posting of a single Marine on Norwegian soil.

The Norway pre-positioning program is proceeding on course and remains a top defense priority for the Norwegians who have stepped forward to provide an unprecedented level of support. Norway's contribution through host nation support has been significant, and has greatly reduced our total pre-positioning requirements.



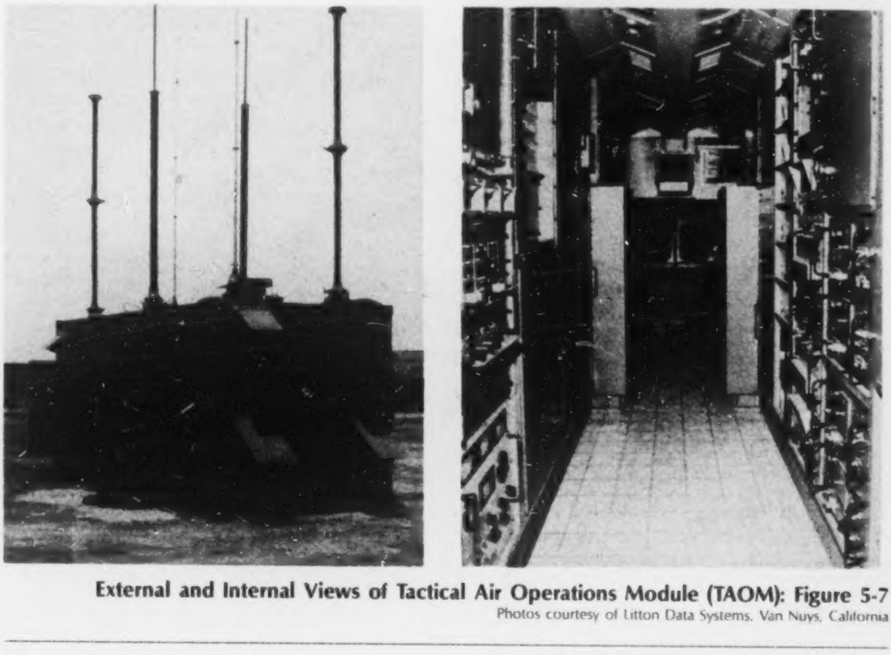
Norway "In-Rock" Storage: Figure 5-6

In addition, Norway has initiated construction of permanent "in-rock" storage facilities for MAB equipment which will greatly enhance the security and maintainability of our equipment. A conceptual illustration is at Figure 5-6. Deliveries of MAB equipment to Norway continue on a yearly basis with procurements fully programmed through 1989.

Finally, the first two exercises with this equipment have proven most successful and have set the course for increasing the scope of future exercises.

As mentioned earlier, Marines will be strategically deployed in a variety of ways. A rapid strategic deployment without corresponding mobility in employment is unacceptable on the modern battlefield. A discussion of our tactical employment efforts is thus appropriate.

As a backdrop, I will briefly outline how we will be organized and supported for those operations. We will employ a Marine Air-Ground Task Force (MAGTF) in order to ensure maximum utility and flexibility. The size and composition of the MAGTF can vary and are dependent upon the mission assigned and the capability of the opposing force. Each MAGTF is drawn from the three Marine Divisions, the three Aircraft Wings, and the three Force Service Support Groups. The MAGTF is comprised of four major elements: Command Element (CE), Ground Combat Element (GCE), Aviation Combat Element (ACE) and Combat Service Support Element (CSSE). There are three types of MAGTF's. The smallest one is the Marine Amphibious Unit (MAU), consisting of approximately 2,000 Marines and Navy personnel. The next level is the Marine Amphibious Brigade (MAB), and the third and largest MAGTF is the Marine Amphibious Force (MAF), made up of about 50,000 Marines and sailors. In the past, our combat, combat support, and combat service support units were honed to a razor's edge while our MAGTF command and control elements were formed in most cases "ad hoc" when we organized for combat. Because it did not make sense to deploy well-trained units under leadership that was supported by an inexperienced staff, we made some tradeoffs to create permanent MAGTF headquarters. Two MAB headquarters were activated this year, bringing our total to six. Two



External and Internal Views of Tactical Air Operations Module (TAOM): Figure 5-7

Photos courtesy of Litton Data Systems, Van Nuys, California new MAU headquarters were activated, for a total of four. When we complete this effort, we will have three MAF headquarters as well.

MAGTF commanders must have dependable, responsive command and control systems to govern operations. Systems now in production or in development will help them achieve swifter and more decisive results on the battlefield.

The Position Location Reporting System (PLRS) automatically provides accurate, real-time, relative location, identification of friendly forces, and limited burst communications capability. PLRS is scheduled for a 1987 initial operating capability. The Marine Integrated Fire and Air Support System (MIFASS) will provide the commander automated support for the integration of supporting arms with his ground combat element's scheme of maneuver. The man-transportable NAVSTAR Global Positioning System (GPS) is a space-based radio navigation system which will provide precise location and exact timing information anywhere in the world.

Our state-of-the-art Tactical Air Operations Module (TAOM) will give us improved capabilities in integrated air defense and air traffic control. Figure 5-7 depicts external and internal views of the TAOM. It will provide a link with our sister Services and allied air command and control agencies for the exchange of real-time tactical data.

We have also made significant strides in information systems management. Automated Data Processing (ADP) achievements include computerized systems for budgeting and accounting and for management of personnel, supply, and embarkation matters. Computer support in forward areas will be provided by the Deployable Force Automated Service Center (DFASC).

Marine Corps Intelligence will be focused on a broad variety of actions which will ensure that MAGTF commanders receive the intelligence they require in a timely manner. In coordination with the Navy, we have developed the Naval Intelligence Improvement Plan for Power Projection which significantly enhances our knowledge of potential operating areas.

The All-Source Imagery Processor (ASIP) now under full-scale development will provide near-real-time digital imagery to the tactical commander, while the Tactical Remote Sensor System will be smaller and lighter. Concurrent with the Final Fielding of the Intelligence Analysis Center, we are equipping our MAGTF's with the test-bed elements of our Tactical Intelligence Management System, portable microcomputers which provide automated intelligence support to deployed units.

The Marine Corps Tactical Exploitation of National Capabilities (TENCAP) office continues to monitor development of advanced national systems. In an attempt to cut costs and reduce development and acquisition time, we are emphasizing use of other Service programs as well as off-the-shelf equipment. In this context we are evaluating the U.S. Army's Technical Control and Analysis Center (TCAC), which will provide an automated signal intelligence (SIGINT) analytical capability. We are also evaluating the Mobile Electronic Warfare Support System, which uses existing technology to provide MAGTF commanders with the capability to intercept, locate and degrade enemy communications.

These fully coordinated efforts will ensure that the Marine Corps has a viable, cost-effective means of providing intelligence support to all types of MAGTF's including the Special Operations Capable Marine Amphibious Units, discussed in detail later.

All of these assets, however, are of little use, if our Marines are not well-trained in their use.

6. Training

The keystone of our training program is recruit training--the first step in a total system designed to prepare the individual Marine for combat. It begins when the recruit steps from the bus (Figure 6-1). Recruit training provides a series of demanding but attainable performance requirements which each recruit can identify and must master. We require the highest standards from our drill instructors and accept no deviation from these standards. Recruit training remains our most valuable training asset, and one of my top training priorities.

New Recruit Begins Recruit Training: Figure 6-1

Subsequent to recruit training, after these men and women have earned the title "Marine," they receive specialized skill training at Marine Corps and other military formal schools. Such schooling qualifies Marines in a particular military occupational specialty prior to assignment to our operating forces. Professional military education is then provided at appropriate times for officers and enlisted Marines in order to prepare them for the increased responsibilities of higher grades.

Career-level education at Amphibious Warfare School hones the warfighting skills of experienced company grade officers through academic endeavors, including extensive wargaming, cold-weather exercises at the Marine Corps Mountain Warfare Training Center, and a battle studies program in which students analyze selected historical battles. As an indication of the recent improvement in the curriculum at Amphibious Warfare School, practical applications in wargaming; terrain analysis; and nuclear, biological, and chemical exercises have increased from 70 to over 500 hours. Similarly, majors and lieutenant colonels at the Marine Corps Command and Staff College, travel to the Marine Corps Air-Ground Combat Center, Twentynine Palms, California to fill key billets in a combined-arms exercise. They also participate in a joint, Middle East exercise with students at other military service schools via satellite-communication links.

In addition, selected officers participate each year in a fellowship program and conduct self-study and research in areas involving national strategy. In the formal training of Marines, we teach them "how to think," in addition to imparting fundamental and advanced concepts and techniques. Those Marines unable to attend a school in residence have nonresident programs available through which they can improve their professional competence. I have stressed the importance of these self-help programs to all Marines.

Major Marine Corps Field Training Exercises
(Active and Reserve)

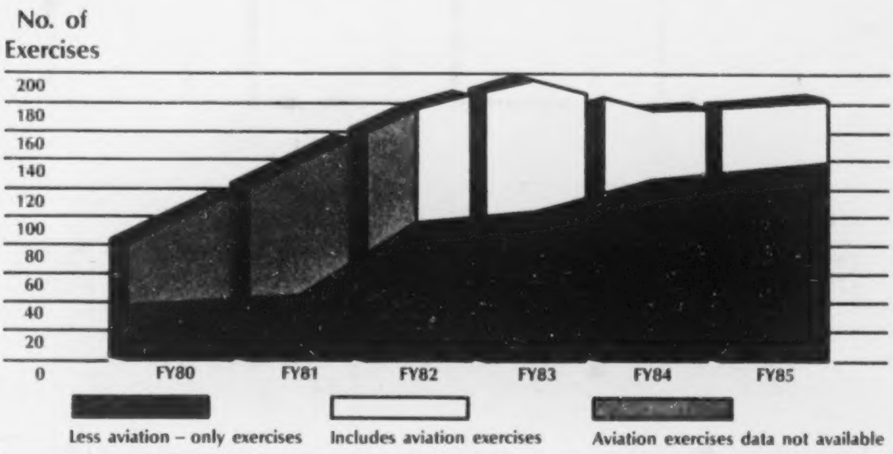


Figure 6-2

Our collective training program is mission-oriented, realistic, innovative, and is dependent upon the individual skills and leadership traits acquired during formal training.

We do not fight as individuals; we fight as a team and train as one in exercises. The number of major exercises since 1980 in which the Marine Corps has participated has increased significantly as indicated in Figure 6-2.

These exercises provide the Marine Corps the opportunity to train under a variety of threat scenarios, environmental conditions, and locales in order to simulate combat conditions. Commanders are thereby able to evaluate their contingency plans, staff coordination, and command and control mechanisms.

Battalion Field Training Days

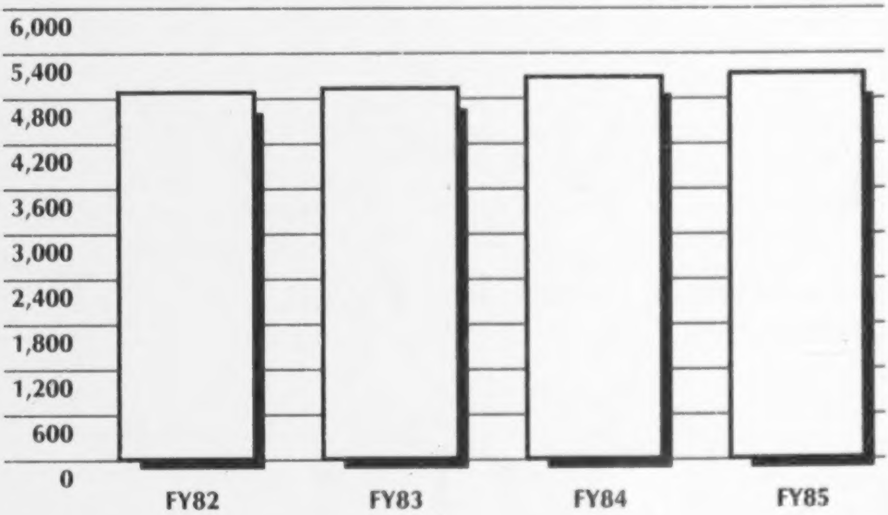


Figure 6-3

The number of Battalion Field Training Days has increased dramatically since FY82 (Figure 6-3). A "field training day" is a day spent in collective unit training, either in the field or in conjunction with amphibious operations.

Ten battalion-sized Combined Arms Exercises (CAX's) are conducted each year at Twentynine Palms, California; eight for Active units and two for Reserve units. The CAX's are conducted in desert maneuver areas which permit the integration of live ordnance delivery with unit maneuver.

Two multipurpose range complexes, one at Camp Pendleton, California, and another at Marine Corps Air-Ground Combat Center, Twentynine Palms, California, are being developed. These ranges will incorporate a vast array of computer-controlled targets for infantry, armor, antiarmor, and aviation units. When completed, these ranges will provide us modern training facilities for teaching precision gunnery with a variety of direct-fire weapons. Ranges of similar function, but limited in scope, are planned for Camp Lejeune, North Carolina; Okinawa; and Hawaii.

The Marine Corps Mountain Warfare Training Center (MCMWTC), Bridgeport, California provides an ideal location to train for potential deployment in northern Europe and western Pacific regions because of the mountainous terrain and cold-weather environment. Approximately 12,000 Marines are trained each year at the MCMWTC. This includes 10 battalion-sized units, one or more of which are from our Marine Corps Reserve.

We also train regularly with our allied counterparts around the world. Marines regularly participate in large scale joint-or combined-training exercises such as TEAMWORK, NORTHERN WEDDING/BOLD GUARD, BRIGHT STAR, UNIVERSAL TREK, TEAM SPIRIT, and DISPLAY DETERMINATION. These JCS-directed exercises provide an opportunity to refine joint tactics, techniques, and procedures.

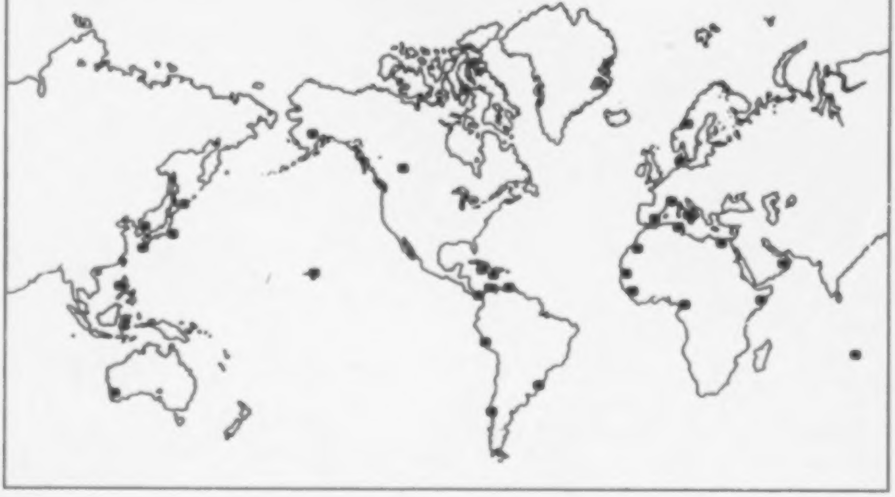
During 1985, as mentioned earlier, we began exercising our maritime pre-positioning forces. This provided the first opportunity to deploy Marine amphibious and maritime pre-positioning forces, and employ them alongside U.S. Army paratroopers on a foreign shore. MPS forces will frequently be included in joint exercises in all theaters.

The Marine Aviation Weapons and Tactics Squadron-One (MAWTS-1) at Yuma, Arizona provides standardized advanced training in all aspects of the employment of Marine aviation. MAWTS-1 conducts the semiannual Weapons and Tactics Instructor (WTI) courses which provide extensive training for 140 aircrews and aviation command and control officers, including reservists, each year. These officers return to their units and establish a cadre of expertise for unit training programs. In addition, MAWTS-1 provides training for over 3,000 Marines in supplemental courses each year.

The goal of all Marine Corps training programs is the overall combat readiness of the Fleet Marine Forces. To this end, the Marine Corps Combat Readiness Evaluation System (MCCRES) provides force commanders a diagnostic training-evaluation system which measures unit capability to meet operational missions. The MCCRES data are analyzed at the various command levels and at Headquarters Marine Corps in order to identify Marine Corps-wide training trends. All of these superb training efforts contribute to our overall readiness to respond globally.

7. Operational Commitments

The quality recognized in our weapons, equipment, organization, and external lift means, coupled with superb training, prepares the Navy-Marine Corps Team for the full spectrum of conflict.



Locations of Exercises-Operations Conducted by USMC Deployed Forces

Figure 7-1

Our Marine Air-Ground Task Forces are globally deployed to support national policy and are, therefore, able to rapidly respond to international crises when directed by the National Command Authorities. Global operational and exercise deployments for FY85 are shown in Figure 7-1.

Our MAF's are deployed worldwide. Elements of our II Marine Amphibious Force (II MAF) deploy from the East Coast to the Mediterranean, the North and South Atlantic, the Caribbean, and the North Sea for participation in joint and combined exercises. In addition, a MAU is continuously on station in the Mediterranean as the Landing Force of the Navy's Sixth Fleet.

Based on Okinawa, III MAF deploys forces in South and Southwest Asia. Infantry battalions and aircraft squadrons rotate to Okinawa and Iwakuni, Japan, from the United States as part of the Unit Deployment Program which was discussed earlier. A MAU deployed from California is on station most of the year in the Western Pacific/Indian Ocean and is also under the operational control of III MAF.

From the West Coast, I MAF units train in preparation for commitments, including commitments to the U.S. Central Command. MAU's and MAB's have deployed and joined Maritime Prepositioning Squadron Two (MPS-2) ships. The presence of forward-deployed amphibious forces, coupled with rapid deployment of additional forces through the MPS program, constitutes the most credible element of deterrence. Adversaries have more to consider, and allies have more assurance.

Additionally, Marine aviation squadrons are deployed with Navy forward-deployed carrier battle groups in order to enhance Navy-Marine Corps interoperability. An additional benefit is derived by providing each Service the opportunity to function in the other's environment. This initiative is not new, but merely an extension of previous commitments. Marine EA-6's and RF-4's have historically been deployed aboard Navy carriers. Interoperability initiatives expand these earlier deployments to F/A-18 and A-6E squadrons. Initial implementation began in September 1985 with two Marine Corps F/A-18 squadrons deploying aboard the USS CORAL SEA.

We are currently planning for two Marine F/A-18 squadrons to be deployed annually aboard carriers. In 1986, two A-6E squadrons will likewise be assigned to a carrier aircraft wing with one to follow in 1987 and one in 1988. The Navy compensates by deploying its A-7 attack squadrons in support of deployed Marine ground forces.

Interoperability is furthered through an exchange of training methodology, concepts, tactics, and doctrine. MAWTS-1, discussed earlier, and Strike University, the Navy's counterpart, have exchanged instructors. Together they have been tasked to coordinate close air support and amphibious warfare support tactics and techniques.

Reserve Program

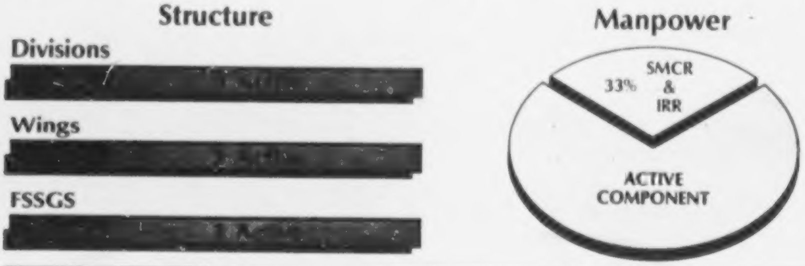
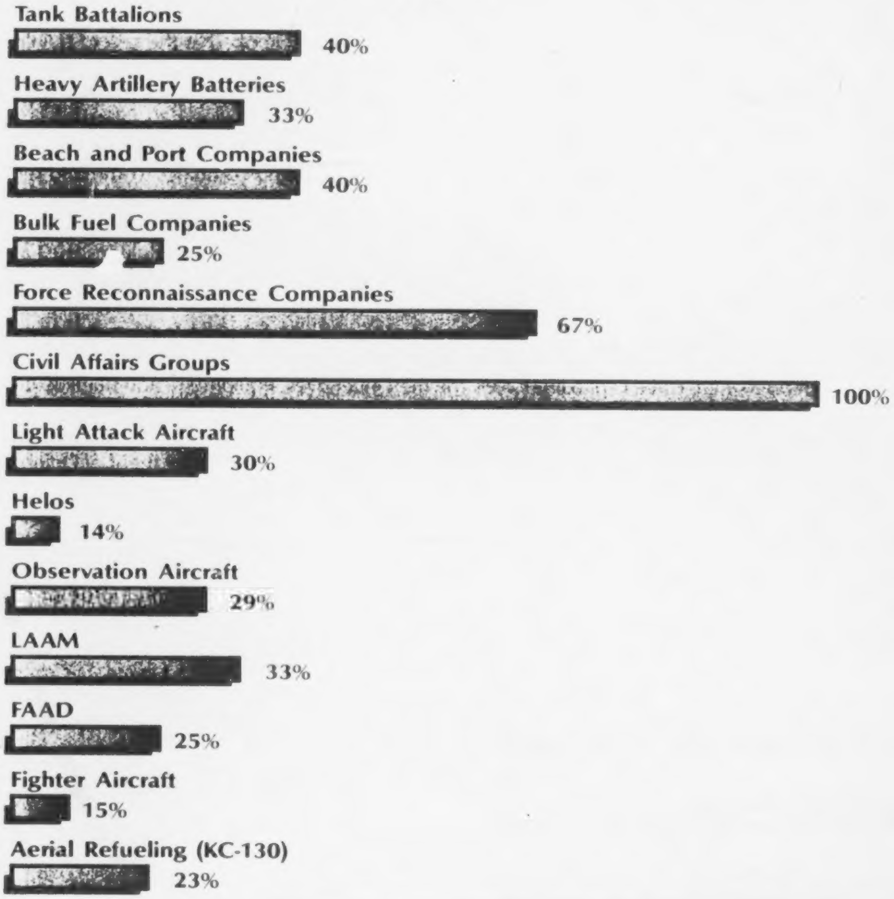


Figure 7-2

The underlying strength of our sustainability is our Reserve. Charged with providing the capability for rapid force expansion during wartime or national emergency, the Marine Corps Reserve is an integral part of the Marine Corps. Units of the Selected Marine Corps Reserve constitute a full 25 percent of the total peacetime combat power of the Marine Corps. Upon mobilization of the Individual Ready Reserve, this capability rapidly grows to 33 percent of the Marine Corps wartime manpower requirement (Figure 7-2).



Reserve Total Force Contributions

Figure 7-3

In consonance with the Total Force Policy that I mentioned in the introduction, the Marine Corps Reserve's warfighting assets constitute a significant portion of our total warfighting capability (Figure 7-3).

The Marine Corps Reserve is prepared to fill roles that both enhance and complement the mission of the Active Force. Trained units and individuals can be quickly assimilated into a total war effort. Through selective augmentation and reinforcement, the three active MAF's can reach full wartime strength. If selective augmentation or reinforcement is not ordered, the Reserve stands ready to provide a reinforced division, an aircraft wing, and a force service support group or elements thereof.

The depth of experience found in the Marine Corps Reserve is its greatest resource. Prior-service experience, added to skills developed in civilian life and applied to the task of training and leading Marines, consistently results in performance far above the norm.

Enhancing the Reserve's capability to satisfy individual mobilization requirements by the recognition of civilian skills, selective use of retraining and refresher training, and the cataloging of Mobilization Training Unit efforts are major Marine Corps concerns.

Operating in diverse geographical environments and in joint and combined command relationships, Marine Reservists trained in 14 major exercises around the world during FY84. In FY85, 20,000 Reservists participated in 18 major exercises, deploying to Korea, Thailand, Canada, Japan, and Scotland as well as throughout CONUS. An extensive FY86 schedule involves approximately 20,000 Reservists in 15 major exercises, including deployments to Hawaii, Puerto Rico, Panama, Turkey, Korea, Norway, and Denmark.

The Marine Corps Reserve has improved a great deal over the past decade. Increased readiness and warfighting capability reflect both programmed efforts and recognition of the Reserve's contribution to Total Force capability. Given the right incentives, equipment, and training, and with the continuing support of the Congress, this warfighting capability can be sustained and our citizen Marines will continue to have our country's confidence.

In light of our worldwide commitment and continuing efforts of the Department of Defense to improve the special operations capabilities of the Services, the Marine Corps has recently completed an extensive examination of the employment of our Fleet Marine Forces in the conduct of maritime-oriented special operations. Our study has revalidated that MAGTF's are distinctly qualified to conduct a broad spectrum of special operations in a maritime environment--particularly when a requirement exists for the introduction of helicopterborne or surfaceborne forces from the sea. This includes a variety of missions: air, ground, and combined-arms, in the areas of both direct action and intelligence gathering.

Although a significant special operations capability currently exists within the Marine Air-Ground Task Forces, particularly in our forward-deployed MAU's, I have nevertheless directed an aggressive program to optimize a pilot program. This program focuses on the enhancement of the capability of forward-deployed MAU's to conduct appropriate special operations.

It is not our intent to establish new organizations which would duplicate special purpose organizations of the other Services. We recognize the unique character and importance of such special organizations, and our goal is to work toward making special operations efforts complementary. Our initial objective is to ensure that our MAGTF's, routinely deployed as part of the Navy-Marine Corps Team, are fully capable of conducting appropriate operations, either by themselves or, when mission requirements so dictate, in conjunction with special purpose organizations of the other Services.

Figure 7-4

The program to optimize our special operations capability will examine the organization, training, and equipment of our Marine Amphibious Units in anticipation of designating those which are qualified as Marine Amphibious Units (Special Operations Capable), or MAU (SOC).

Marine Security Guards (Figure 7-4) serve with the State Department at embassies around the world. As a result of the upsurge in terrorist activity and the need to provide greater internal security for our embassies and consulates, the Department of State has requested an increase in the number of Marines assigned to this duty. The increase would permit establishment of detachments at several locations which now operate without Marines, and additional Marines to existing detachments to meet changing security needs.

While the Chiefs of Missions must continue to rely on the host country for external security as provided by the Vienna Convention of 1962, internal security remains a vital concern and responsibility of the diplomatic corps. The Marine Corps fully supports this critical area of security.

Not only do Marines assigned to embassies encounter an increased probability of terrorist actions against them, but Marine Barracks and our forward-deployed MAGTF's confront this ominous threat as well. Let me update you on our program to combat terrorism. I would like to emphasize, at the outset, that the cornerstone of the Marine Corps program is my continuing belief that the best deterrent to terrorism is an alert, aware, combat-trained Marine. To that end, terrorism-counteraction training has been incorporated in selected Marine Corps formal schools. The classes range from 2 hours at recruit training to 25 hours for our officer-students at Command and Staff College. Our attendance at other Service schools dealing with measures to combat terrorism has increased 177 percent from 1984 to 1985. For FY86, we programmed 1,000 Marines to attend specialized skill schools where these measures are taught.

In addition, instruction on Military Security, to include Interior Guard, Terrorism Awareness, and Terrorism Counteraction will be incorporated into our Essential Subjects Program. This will ensure that every enlisted Marine, from private to gunnery sergeant, in every MOS, is trained and tested annually on the subject. Finally, the Marine Corps Institute has developed a correspondence course available to all Marines that devotes 75 percent of the material to victim avoidance and those measures designed to reduce the risk of attack. The remainder of the course provides hostage survival information and a Marine's responsibility under the Code of Conduct.

Since the tactics of terrorists continue to change, our program must be dynamic. We also must be alert to the ever-increasing threat posed by state-sponsored terrorism and coordination between terrorist groups. Accurate intelligence, as I mentioned earlier, is critical in combatting this increased terrorist capability. Today, our Marine Amphibious Forces are better prepared through an increase in their Staff Counterintelligence Sections.

We have also made significant strides in physical security. Our upgrade of conventional missile and rocket storage facilities is complete, and funds have been programmed to improve the structural security for our light automatic-weapons storage facilities. There has been steady improvement in our flight line security posture with an additional allocation of 742 military police billets. Physical security enhancements have been added at all aviation installations.

Another important aspect of our program concerns unit training in terrorism which teaches counteraction doctrine and tactics. In addition to providing publications which focus on combatting terrorism at posts and stations, we are developing other manuals specifically designed for our forward-deployed units. The operational performance standards that I referred to in last year's posture statement are now in the hands of Marine commanders. These standards provide our operational units a diagnostic training evaluation system to measure their capabilities. Significantly, for the first time, our posts and stations will use these same standards as a measuring stick by which to determine their preparedness.

Finally, commanders have developed programs at all unit levels to combat terrorism. We intend to prove to terrorists that attacks against Marines are not worth the price they will have to pay.

8. Conclusion

In describing the "state" of our Corps, I have attempted to underscore the factors which make it ready for global commitment. Your Marine Corps is ready! It will remain ready because of our investments in quality: quality people, an improved quality of life, the finest weapons and equipment, and superb integrated training.

We shall continue to groom leaders at all levels of command–leaders whose skills are sharpened by professional education; leaders who are taught "how" and not "what" to think. We owe this to those young, bright patriots who daily enter our ranks.

Thanks to your support, Marines' quality of life has improved. Concerted efforts are being made to upgrade facilities and housing, both for the single and married Marines. Emphasis on the family has increased the stability of the home environment; benefitting Marines, their families, and the Corps.

With continued congressional assistance, we will equip your Marines with modern, reliable, state-of-the-art weapons acquired in the most cost-effective manner, and support them with the finest aircraft, artillery, and naval surface fire support in the world.

A well-led, properly-equipped Marine is only limited by his or her training. Our innovative training programs and maximum use of realistic training environments ensure that your Marines are prepared for future conflict should the need arise.

My priorities as Commandant have been to perpetuate the quality standards established by my predecessors and to bring stability to the Corps. I want to create the most stable living and working environment that I can for your Marines in this unstable world.

Appropriation/Authorization Request
($ in Millions)

Appropriation Title	FY86	FY87	FY88
Military Personnel, Marine Corps	5,196.3	5,333.4	5,355.6
Reserve Personnel, Marine Corps	287.3	314.8	321.0
Operation and Maintenance, Marine Corps	1,666.5	1,864.1	1,887.6
Operation and Maintenance, Marine Corps Reserve	58.2	65.3	64.9
Procurement, Marine Corps	1,660.8	1,565.0	1,909.1
Marine Corps Stock Fund	37.7	45.9	66.2

Figure 8-1

Our budget reflects a program that provides the maximum defense for each dollar invested (Figure 8-1). The Marine Corps requires only a small fraction of DOD's funds, yet provides a large share of America's tactical ground and air forces. Your support will ensure that your Marine Corps remains this Country's premier Force-in-Readiness, "first to fight."

Marines on duty around the world today are the most vital elements of the Corps. They are magnificent people, and they deserve your continued support.

Because of the outstanding posture the Marine Corps is in today, we are prepared to deploy highly-trained and well-equipped Marine Air-Ground Task Forces that can be employed across the entire spectrum of warfare--from low intensity crisis situations to the support of naval campaigns in order to deter or resist Soviet aggression. When this nation needs a quality force to project amphibious power anywhere in the world, we are ready. ONE CALL GETS IT ALL!

Senator **Thurmond**. Thank you, General Kelley. The Chief of Naval Operations is in China on official business and we welcome Admiral Busey, the Vice Chief.

STATEMENT OF ADM. JAMES B. BUSEY, VICE CHIEF OF NAVAL OPERATIONS

Admiral **Busey**. Thank you, Mr. Chairman. As you mentioned, the Chief of Naval Operations is just winding up a very beneficial trip to China. He has asked that I submit his formal statement for the record, and with your permission, sir, I will do so and I would also like to make a few brief comments.

Monday night, in response to orders from the National Command Authority, and together with units of the U.S. Air Force, Navy aircraft conducted strike operations against selected military and terrorist targets in Libya. We used a full spectrum of sophisticated Naval weapons systems, both old and new.

These included the A-6E TRAM night/all weather bombers, A-7E and F/A-18's, firing HARM and SHRIKE weapons, EA-6B's providing jamming, and the E-2C and F-14's for command control and fighter coverage. Our ships, aircraft and personnel performed superbly. It was truly a coordinated effort, and clearly demonstrated how well the Navy and Air Force work together in joint operations.

Just a few days ago, after the 6th Fleet freedom of navigation operations in the Gulf of Sidra, Admiral Watkins had the occasion to visit the ships of the battle force including U.S.S. *Saratoga,* which arrives home in her home port today, as well as the SS *Coral Sea* and the *America.* He came back with stories of sky-high morale, first-rate readiness, and equipment that works, as well as people that know how to keep it working and people who know how to use it when necessary.

The Aegis systems in *Ticonderoga* and *Yorktown* performed flawlessly, giving our battle force a total surface and air picture that enabled them to control the skies over enough ocean to ensure the safety of our ships and crews. You have heard and read much of the performance of our pilots and weapons systems in taking appropriate and restrained retaliatory action, so I won't repeat it here, sir. I would just say that the money spent to revitalize our Navy, to restore it and to make up for the neglect and decline of the last decade, was money well spent.

Was it worth it? You have heard the Navy's answer to that question. In the waters south of Libya's proclaimed "line of death," and again Monday night, the answer is yes. We have a more modern, capable Navy, and yes, we certainly do know how to sustain and to employ the tools that you have given us.

This committee's action in the forefront of helping us take corrective action, and seeing that we got the legislation to get us moving in the right direction again, was key to that effort and as a result there is a feeling of pride, patriotism, and self-confidence in our Navy today that reflects just what you would expect from a well-equipped, well-trained fighting force.

Our personnel situation is greatly improved, and in great contrast to the career force which was down and nearly out just 5 years ago. Things are going well in the Navy today. We have more modern, capable ships in greater numbers. Our ability to operate and maintain them has improved notably. Career personnel manning has improved. Drug abuse, unauthorized absences and desertion rates are down drastically.

And, because things are looking up for the Navy, Secretary Lehman and Admiral Watkins have been able to take a very important step to improve the quality of life of our seagoing personnel and their families by directing that peacetime deployments outside the Continental United States be limited to 6 months in duration so that the ships and squadrons can expect a minimum of 12 months between overseas deployments, and that a minimum of 50 percent of their time at home is now spent in home port during their operating cycle.

This is only possible because of the improved Navy I have described. I thank you for this opportunity to submit my comments.

[The statement of the Chief of Naval Operations follows:]

A REPORT BY ADMIRAL JAMES D. WATKINS,
UNITED STATES NAVY,
CHIEF OF NAVAL OPERATIONS, ON THE
POSTURE AND FISCAL YEAR 1987 BUDGET
OF THE UNITED STATES NAVY

Mr. Chairman and distinguished members of the Committee: For the past four years, I have been privileged to lead our Navy on a steady course of growth, rejuvenation and restoration. I have been able to inform you the Navy is increasingly ready to perform its duties, a fact many of you confirmed first-hand by observing the superb performance of our sailors at sea. In no small measure this success has been due to your support and to our partnership in defense matters.

We are at a critical point. National consensus on defense has fragmented amid concerns over the deficit, allegations of defense wastefulness and assertions that substantial defense expenditures have produced insubstantial results. Plans for modest growth are fragile in view of last year's no-growth appropriation and the impending prospect of automatic cuts in budget request and outlays. It is time to place in perspective accomplishments of the past few years and to take a long-term look at requirements of the future. Decisions made over the next several months will chart the course for the remainder of the decade and beyond. We should avoid the tendency toward analysis by anecdote, and instead establish a consistent benchmark to measure performance and determine requirements.

There is a single framework to measure Navy accomplishments, assess the adequacy of forces, and establish requirements. The framework is strategy -- national strategy in general, and its maritime component in particular. In my first report to you three years ago, I set forth the emerging outline of a maritime strategy which included a fresh review of linkages between national policy and military strategy. Subsequent development and application of maritime strategy has ensured that requests for resources match requirements and that fleet operations and training proceed from a common perspective toward logical goals. Maritime strategy has also provided a coherent foundation for explaining Navy's purposes and discussing our course with the Congress and other important audiences outside the Navy. Strategy has become the nucleus of our profession.

Therefore, I want to review the principal outlines of the maritime component of national strategy. I will assess the Navy's performance and describe our accomplishments measured against the strategy. I will discuss near-term requirements reflected in our budget submission, and describe how maritime strategy shapes this program. Finally, I would like to consider longer-term challenges and opportunities which will shape strategy as we approach the 21st century. At this critical point you need and deserve a clear standard to assess the Navy's progress and set our future course. If you measure us by the strategy standard, you will find our programs justified, supportable, and essential to protecting this nation's interests today and in the future.

MARITIME STRATEGY AND NAVAL OPERATIONS

My previous reports to you have traced development of our strategy for deterring or, if necessary, fighting the Soviets in a major war, as well as for supporting national objectives in a variety of more likely operations short of major war. It is important to review briefly the sources, characteristics and new directions of maritime strategy to place it in perspective.

Maritime strategy is founded on basic United States national security objectives which include preserving the United States as a free and sovereign nation; supporting the country's economic well-being; fostering an international order consistent with our interests; and protecting the United States, its allies, friends, and overseas interests from coercion or attack. Given the world wide scope of our interests and obligations, the realities of geopolitics, and the nature of American government and society, national military strategy has consistently focused on three interrelated elements:

o Deterrence: Demonstrating military capability and will to deter and, if necessary, fight any potential aggressor at the required level of conflict.

o Forward defense: Maintaining deployments and rapid response capabilities to protect U.S. interests and commitments world wide and counter threats far forward. Forward defense is not only an integral part of deterrence, but ensures that, if deterrence fails, the fight will be in the aggressor's backyard, not ours.

o Alliance solidarity: Recognizing that allies are essential to deterrence in peace and crises, and to coalition warfare if deterrence fails. Alliances contribute both to the requirement for forward defense and to our capability to sustain a forward posture.

While these elements of national strategy have remained constant, the world environment and threats to our interests have not. In the maritime arena, two factors have profound effects on our ability to sustain a world compatible with our interests. First, Soviet naval and military threats have become truly global. Second, rise of an era of violent peace has threatened international order and stability.

The Soviet Challenge and Maritime Strategy

Over the past two decades, the Soviets have developed a formidable and continually improving blue-water navy able to further Soviet interests and challenge U.S. interests world wide. Their navy, with impressive new capabilities, has demonstrated the ability to conduct large-scale operations far from their shores, as reflected in recent open-ocean exercises in the North Atlantic and North Pacific. The most salient features include:

o Global disposition. As an example of the rapid Soviet evolution from a defensive to an offensive global naval power, the Soviet Pacific Fleet more than doubled its operating days out of home waters since 1975, and its major surface combatants and submarines increased by more than 20 percent. It is now the largest of their four fleets, testimony to their recognition of the Asian region's growing importance and potential in the global scheme of things.

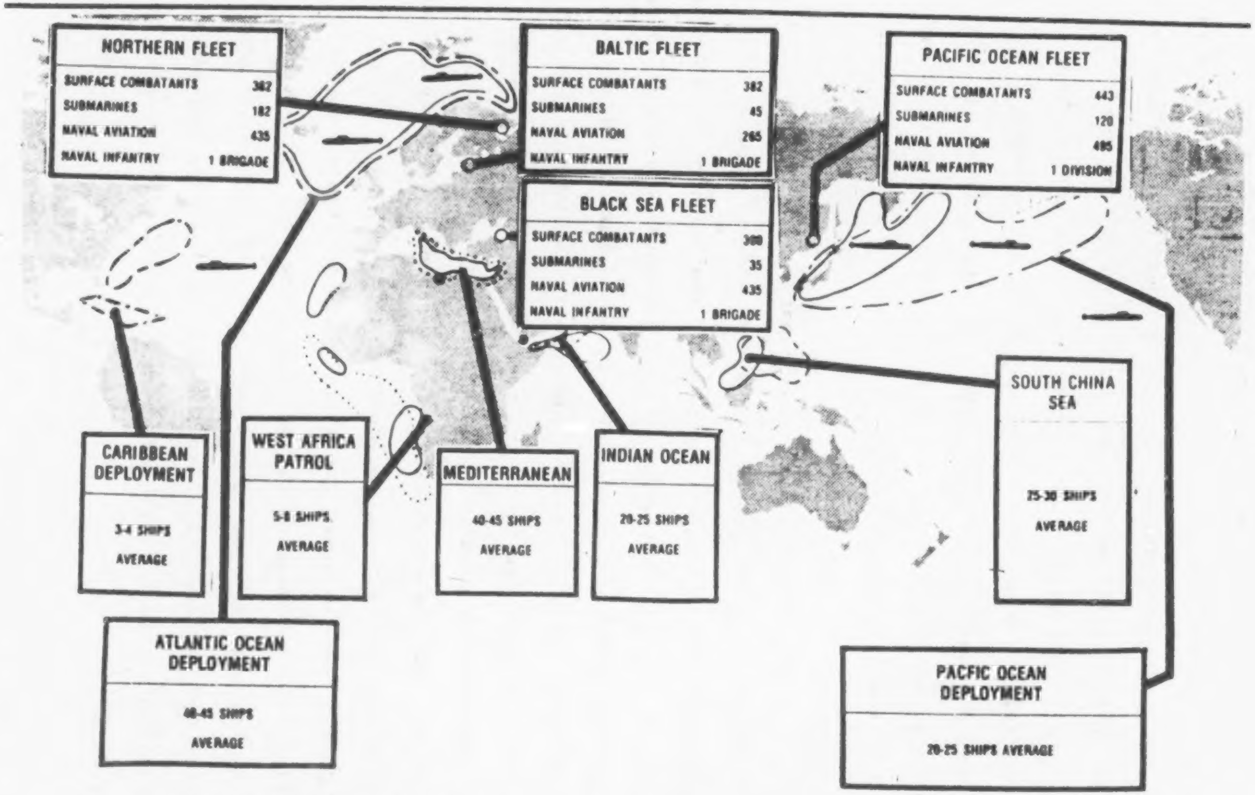
o Global reach. The Soviets are increasingly capable of sustained operations in distant areas. Recent fleet additions clearly reflect increased attention to range and endurance. Military airlift and sealift have grown significantly.

Relationships with fellow Marxist states have given the Soviets access to air and naval facilities in key locations near vital sea lines of communications, including South Yemen, Ethiopia, Angola, and Vietnam, as well as their longstanding presence in Cuba. Most noteworthy, the Soviets have established their first fully developed overseas base at Cam Ranh Bay, Vietnam. It supports a sizeable contingent of ships, submarines, tactical and long-range aviation. Figure 1 indicates the disposition and reach of today's Soviet Navy.

o Evolving full-spectrum capability. The Soviet Navy is aggressively developing the range of warfare capabilities commensurate with its global posture. The Soviets not only have the world's largest submarine force, but have introduced 13 new classes of submarines since 1975, 3 in the last 2 years alone. By contrast, the U.S. has introduced only two new classes during the same period. New Soviet submarines incorporate fundamental improvements over previous classes, including quietness, and sensor and weapons capability. New surface ships mount modern, capable anti-air and anti-submarine warfare systems to complement the Soviet fleet's historically strong suit of anti-surface warfare. Soviet Naval Aviation also gained significant new capability with introduction of the BACKFIRE supersonic bomber in the mid-1970's, and will take another quantum step forward with completion of their first large-deck aircraft carrier late in this decade.

Figure 1

SOVIET NAVY ACTIVE GLOBAL PEACETIME POSTURE
FY 85



NOTE: *Surface combatants include aircraft carriers; principal surface combatants; patrol, mine, and amphibious warfare ships and craft.*

Substantial Soviet naval improvements represent a major change in the strategic environment over the last 10 or 15 years. The Soviet Union, a continental nation, has become a maritime power by choice and design. The United States, linked to our friends, allies, trading partners and other vital interests by vast ocean areas, is a maritime power by necessity. When the predominant land power can contest control of an expanding portion of the world's oceans, an island nation must be concerned. As President Reagan observed early in his administration, a strong navy is not a luxury but a requirement.

Maritime strategy has focused our efforts on a qualitatively different and much improved Soviet challenge. It has helped develop better forces and better concepts of application in order to sustain U.S. national security policy in a changing strategic environment. The strategy has evolved around several underlying principles:

o Maritime strategy is an essential component of national deterrent strategy. Deterrence requires not only visibly capable forces, but also thought and thorough preparation for how a war with the Soviets could begin, and how it would be fought. Deterring the Soviets requires convincing them that any war they start could be a long war fought on terms and in places not of their choosing.

o It addresses warfighting requirements, in particular requirements for defeating Soviet strategy in a protracted conventional war. Recognizing that the Unified and Specified Commanders actually fight wars, it does not purport to be a detailed war plan. Instead, it offers a global perspective to operational commanders and provides a foundation for advice to the National Command Authority.

o It is a global strategy dealing with a diverse global threat and recognizing the complex relationships among operational theaters. It emphasizes that deterrence is a global proposition, that efforts to control and contain local crises may have global implications, that any war with the Soviets would probably become global, and that we should cede no area to the Soviets by default. Global strategy does not imply that we would simultaneously fight in all theaters of operation at the same level of intensity. If war came, we would likely have to assign priorities and conduct sequential operations. But the problem is global, and as a result, our perspective must also be global.

o It is a forward strategy, drawing on forward deployments and rapid mobility of naval forces. If deterrence fails, options are available for early offensive action to destroy enemy maritime forces as far forward as possible, aggressively protect sea lines of communications, support and influence land battles, and secure favorable war termination. It includes seizing the initiative and carrying the fight to the enemy to disrupt his strategy and achieve our objectives.

o It is a strategy of alliances and coalitions. It relies on our allies' major contributions to collective security, draws on agreed alliance strategy, and recognizes the crucial role of naval forces in binding together alliances and coalitions.

o It is a multi-service strategy which emphasizes the necessity of joint operations. Growing numbers of joint exercises, operations and inter-Service agreements reflect this emphasis.

o It is a flexible strategy, providing a set of global options which draw on the range of capabilities inherent in naval forces to control escalation and achieve war termination objectives without resorting to nuclear weapons.

The maritime component of the U.S. deterrent is stronger today than five years ago for many reasons. Naval forces are more modern and capable. They are more ready and sustainable. Our people are more experienced, better trained, and motivated. Finally our deterrent is stronger because of the coherent, well-articulated strategy which I have described.

Violent Peace and Maritime Strategy

While maritime strategy provides a consistent framework in which to assess changing requirements for global war with the Soviet Union, it increasingly must deal with requirements of another major change in the world environment: an era of violent peace. Some 100 years ago, Captain Alfred Thayer Mahan observed that naval strategy is as necessary in peace as it is in war. This truth has rarely been more evident: today, the Navy confronts issues of diversified violence below the threshold of war and faces a broad spectrum of possible threats.

The major powers are technically at peace, yet violence often dominates the international arena. In recent years we have seen a succession of crises and armed conflicts among nations, insurgencies and civil wars, endemic low-level violence, and countless instances of terrorism. Table 1 indicates the geographic scope and range of intensity of this violence. Much of this conflict occurs in the developing world, in locations far from our shores, yet important U.S. interests are often involved. Our Navy has been called on more than 200 times since World War II to protect American interests in crises around the world. We operate routinely on forward deployments often determined by potential threats to U.S. interests.

TABLE 1

REPRESENTATIVE CONFLICTS, 1985

Conflicts and Crises Between States

*Gulf War (Iran-Iraq)
*Indochina Conflict (Vietnam, Kampuchea, Laos, Thailand, China)
*North Africa Crises (Libya-Tunisia and Libya-Egypt)
Southern Africa (South Africa-Angola, South Africa-Lesotho)
*Central American Crises (Nicaragua-Costa Rica, Nicaragua-Honduras)
*Horn of Africa (Ethiopia-Somalia)
*Afghanistan-Pakistan Tensions

Civil Wars and Insurgencies

Afghanistan
Ethiopia
Sudan
Mozambique
Angola
Namibia
Western Sahara
*Lebanon
Chad
*Philippines
Indonesia
Burma
*Nicaragua
*Guatemala
*Colombia
Peru
Bolivia
Uganda

Coups and Attempted Coups

Liberia
Nigeria
*Thailand
Uganda
Sudan

Violent Civil Unrest

*Sri Lanka
India
Chile
South Africa
New Caledonia
Jamaica

Terrorist and Related Incidents

*Lebanon
Malta
*Eastern Mediterranean Sea
France
Italy
Austria
*Libya
Greece
Spain
West Germany
Belgium
Israel
*Iran

*Naval forces present in region on forward deployment or contingency operations.

Conflicts have long been a fixture of the world environment, but recent developments increase the significance of these conflicts and create an expanding range of maritime objectives beyond being prepared to counter the Soviets in direct conflict. One factor is the complexity and scope of U.S. world wide interests, which increasingly focus on the developing world. U.S. and allied economies depend on strategic resources from the developing world: oil from the Persian Gulf and Caribbean, and minerals from Africa and southeast Asia. Trade with nations of the Pacific region has for several years exceeded that with Europe, and political cooperation in the region is also growing. Manufacturing capabilities are often integrally linked with Third World nations in the emerging "global factory"; for example, an American firm may ship Japanese semiconductors to Taiwan for assembly into circuit boards, which are then returned to the United States for assembly into a Navy weapons system.

These interests create vital stakes in the stability of many areas. In a general context, regional stability promotes trade, economic development, and democratic forms of government. In a more specifically military context, the more stable the regional environment, the lower the probability that the Soviets or any other aggressor will find opportunities or incentives to risk war. Moreover, because major war would most likely arise from some regional conflict, we have a broader interest in preventing regional conflicts from beginning an uncontrolled escalatory process.

Challenges to regional stability are numerous and longstanding: economic and political perturbations, religious and ethnic hostilities, border disputes, aggressive designs for hegemony. These are magnified by increased Soviet ability to exploit them to promote movements and governments aligned with them. In particular, Soviet use of Cuban and other proxy forces to aid "liberation" movements and sustain Marxist governments has fundamentally changed conflict in the Third World. These factors, combined with increased Soviet military and naval global reach, make it likely that the Third World will increasingly be the scene of both indirect and direct Soviet encroachment on U.S. interests.

Another trend making the world potentially more hazardous and complicating naval requirements is acquisition of modern, highly capable weapons by states or factions in the developing world. These make Third World conflicts more violent and dangerous and they increase the range and lethality of threats which U.S. naval forces may face. Nearly 50 Third World nations now operate modern anti-ship missile systems, and some 20 possess submarine forces of varying capabilities. While many of these nations are friends or treaty allies, many others are potentially hostile. The military threat in many Third World areas is formidable and highly demanding, particularly when complicated by Soviet intervention or support.

Terrorist threats pose another disturbing trend. Terrorism is not new, but the threat to our interests has increased markedly. Terrorists have international organizations, exploit mass communications and use rapid transportation. Increasingly, they are directly or indirectly sponsored by states which see a cheap but effective way of striking blows at stronger enemies. Terrorism's effects must be kept in perspective, but they clearly add to the challenges of maintaining forward deployed forces and protecting American interests.

Thus, a strategy to deal with violent peace is shaped by interests, objectives and world conditions which are not necessarily parts of a strategy to counter the Soviets in global war. Peacetime interests and objectives are global and diverse, focused not only on the Soviet Union or its periphery but also on the developing world. We face an extraordinary spectrum of threats, ranging from terrorism and low-level violence, through crises and small wars, to a major war. At the lower end, we must employ military forces to achieve political or foreign policy objectives. At the upper end, peacetime strategy merges into global war strategy, and the two must form an integrated whole. I will now discuss our evolving peacetime strategy, which comprises three principal elements: forward presence, crisis response, and training and readiness operations in home waters.

Forward presence. Global forward posture in peacetime is a key element of national military strategy. Naval forces are particularly crucial in many areas where they are the only feasible form of forward deployment. The impact of forward deployments is enhanced by a qualitatively improved fleet which is not only larger today than five years ago, but brings to bear quantum improvements in capabilities such as TICONDEROGA-class Aegis cruisers and OHIO-class Trident submarines. Roughly one-third of the operating Navy is deployed on any given day, conducting training and exercises with friendly and allied nations, making port visits, and carrying out a range of other operations. Forward operations signal the global scope of U.S. interests and commitments.

The nature and location of forward deployments result from decisions at many levels: specific alliance commitments, national policies, Navy requirements, and operational decisions by Unified and Navy commanders. In general, however, certain principal considerations form the framework:

o Forward deployments focus on locations where imminent threats to U.S. interests require an on-scene military capability. Requirements for crisis prevention and response define a substantial part of our deployments. For example, the Persian Gulf conflict and the unpredictability of the Iranian government pose a continual threat of violence against allied and friendly interests, particularly unfettered access to vital oil resources. Free world economies can ill afford any effective threat or actual curtailment of petroleum product flow to and from the region. Consequently, Navy surface combatants are constantly on patrol in the Persian Gulf, and a carrier battle group is routinely in or near the North Arabian Sea. In the Near East, U.S. interests and citizens remain at risk from a variety of sources, and U.S. naval presence includes surface combatants in the Eastern Mediterranean and a carrier available on short notice. Increasing seaward claims of some littoral nations, coupled to modern armaments with substantial seaward reach, pose a threat to essential maritime freedom of passage. An example is Libya's excessive territorial claims in the Central Mediterranean, backed by Libya's modern forces, recently escalated by deployment of an upgraded air defense system. The latter includes Soviet-supplied SA-5 surface-to-air missiles which will extend Libya's hostile reach 150 miles into Mediterranean airspace. Here and elsewhere, forward deployed naval forces conduct operations to protect transit rights and unimpeded use of international waters and airspace.

This past year, Navy units also participated in a major drug interdiction campaign, Operation Hat Trick II, a significant addition to existing commitments and normal presence operations which again showed the flexibility of naval forces in support of national objectives.

o Forward deployments are also shaped by the requirements for coalition-building. Alliances, friendships, and regional arrangements can contribute to international stability. All U.S. alliances have a major maritime dimension, and joint exercises, training, and security assistance programs are crucial. This past year, for example, we conducted 86 combined exercises involving some 55 countries, ranging from the 160-ship Exercise Ocean Safari with NATO allies, and an equally large-scale exercise with Pacific friends and allies, RIMPAC; to more modest efforts such as Cobra Gold, an amphibious exercise with Thailand; to small-scale exercises of opportunity with passing units of allied navies in virtually every ocean.

Many such exercises involve forces forward deployed for other purposes. But a substantial number of units deploy specifically to conduct important exercises. For 26 years, U.S. ships and aircraft have deployed annually to exercise with Western hemisphere navies in the UNITAS series. Every year, a sizeable number of units deploy to the North Atlantic to operate with NATO allies in large-scale exercises. These and similar deployments ensure interoperability and build strong ties essential for deterrence and effective warfighting should deterrence fail.

o Forward deployments include areas where naval forces promote diplomatic, economic, and other objectives of foreign policy not specifically military in character. Port visits have been particularly useful in this context. A sovereign nation permitting a U.S. warship to visit its ports is making a significant political statement, particularly in a time of new nonalignment trends. Within the past two years, Navy surface combatants made port visits to India, the first such visits in 13 years, thus symbolizing the recent evolution of U.S.-Indian relations. Last year, Navy ships visited some 108 countries ranging from Honduras and Guatemala to Denmark and Norway, from India and Sri Lanka to Fiji and Papua New Guinea. Port visits may support foreign policy objectives of promoting moderate and stable governments in unstable areas. They may also gain access to countries where other U.S. forces are excluded, providing crucial opportunities to improve bilateral relations, such as recent visits to Madagascar and the Comoros Islands in the Indian Ocean. Sailors are ambassadors and representatives of the American people in ports around the world, and have freely given their off-duty time and considerable skills to participate in self-help projects with the local populace, assist orphanages and other charitable institutions, and contribute to a variety of other endeavors which exemplify the American spirit of generosity.

o Forward deployments are also shaped by requirements for active and direct deterrence of a major war with the Soviets. Patrols by ballistic missile submarines constitute a fundamental component of the nation's strategic nuclear deterrent. Forward peacetime operations by our own attack submarines, maritime patrol aircraft, and surface ships make clear to the Soviets that should they choose to go to war, there are no maritime sanctuaries for them and their submarine force would be immediately at risk. Through these and other forward operations, we send a clear message to the Soviets that we have the capability and experience to carry out campaigns envisioned in the maritime strategy, and thereby deter global war for which we train.

o Forward deployments are driven to a lesser extent by Navy objectives for training and readiness. Forward deployed operations increase readiness, ensure real-world operational expertise, provide day-to-day preparedness and build our confidence. While Navy training and readiness objectives are clearly subordinate to national objectives, they are nonetheless important to maintaining a ready force.

These, then, are considerations which determine locations and composition of forward deployments for naval forces. Since they often overlap, one deployment may serve several objectives. They also compete. For example, forces deployed to provide direct deterrence of the Soviets tend to operate in the North Atlantic and North Pacific Oceans, and may contribute little to crisis prevention in the Third World. Ships deployed to prevent crises may be unable to make diplomatically-important port visits. Naval forces are a scarce resource which must be allocated among competing demands. But their inherent flexibility permits selective allocation.

Crisis response. Crisis response has long been the business of U.S. naval forces and is a central concern of our evolving strategy. Naval forces have been a principal instrument for responding to crises for several reasons:

o Naval forces are readily and rapidly available, largely because of the previously discussed forward posture keyed on likely crisis locations. A credible on-scene capability establishes U.S. commitment and intent to be involved, and forms the basis for a wide range of initial responses. Moreover, this capability is often available without politically sensitive requests for use of friendly nations' airspace or territory.

o Forward-deployed naval forces employed for crisis response are practiced in joint operations with allies and other U.S. military Services.

o Naval forces have unique flexibility and mobility. They can operate unobstrusively or quite visibly; apply a range of capabilities against targets at sea, along a littoral, or deep inland; and prevail against a variety of threats. For deterrence or response, naval forces provide precise capabilities at varying levels of hostility. These qualities permit the national leadership to tailor application of force to a particular crisis.

A key consideration in crises is our ability to dominate and control escalation, to ensure that we achieve specific objectives while limiting the scope of possible conflict and terminating military action as soon as possible. This issue is particularly important in crises which might involve the Soviet Union. Given the Soviet Navy's growth in capability and reach, their ability to intervene in crises far from their shores adds a new dimension to the strategic calculus of crisis response. While there have as yet been few direct confrontations between U.S. and Soviet naval forces, the potential increasingly exists, and must be considered in our decisions.

Thus, substantial interaction exists between forward presence and crisis response considerations. Forward presence shapes the range of options in crisis, at least initially, and crisis response sometimes leads to new forward deployments. Threats of an era of violent peace interact with the threat posed a capable Soviet forces. Our ability to respond to crises while controlling the escalation threat requires highly capable forces.

Training and readiness operations. On any given day, about two-thirds of the operating Navy is neither forward deployed nor responding to crises, but in home waters conducting underway training, or in port for upkeep and inport training. These operations are shaped largely by internal Navy objectives and requirements, but they can contribute to other peacetime strategy objectives and must be an explicit part of our strategy. For example, while it may not be feasible to conduct a multi-carrier battle group exercise in forward areas, such an exercise can readily be conducted in home waters. A large-scale exercise in home waters plays a powerful role in deterrence, conveying to the Soviets what we could do in forward areas. If such an exercise includes allied participation, it can serve alliance-building objectives as well.

Inport training exercises are increasingly important. Modern training technology permits us to conduct challenging, large-scale battle group exercises among units which are pierside. In Second Fleet homeports, for example, Battle Force Inport Training is scheduled regularly, exercises a full battle force, and is as close to a major fleet exercise as possible without actually getting underway. While such exercises cannot be as realistic as those at sea, they fully exercise command, control, and communications procedures, and support strategy objectives at minimal cost.

Nondeployed units are also the source of surge capability for large-scale crises or conflicts, when forward forces might need immediate augmentation. Demonstrating surge capability is an important component of deterrence and crisis control. During the Grenada rescue operation in 1983, for example, we assembled a surge battle group from inport units, formed around the carrier AMERICA, as a possible relief for the INDEPENDENCE battle group then off Grenada. The AMERICA battle group was underway on four days' notice, was fully operational three days later, and could have augmented or replaced INDEPENDENCE as required. On a more routine basis, we conduct short-notice sorties of fully-loaded attack submarines to demonstrate and practice surge capabilities.

Because resources are limited, it is essential that we obtain maximum strategic benefit from every underway day. There are clearly strategic objectives which we can pursue efficiently through nondeployed operations as well as forward deployments, and we will continue to incorporate home waters operations into overall peacetime strategy.

A Dynamic Strategy

These are the main themes of a maritime strategy designed to be in consonance with the national military strategy and sufficiently robust to permit us to continue to be an effective player across the spectrum of violence we face. It is a dynamic strategy, continually evolving in response to changes; maturing in view of insights gained in wargames, simulations, countless seminars and discussions; and leavened with the reality of fleet experience and exercises. It began as a strategy to address the central question of deterring or fighting a global war against the Soviets. Increasingly, however, it has evolved rapidly to encompass issues of diverse threats to our many interests in this era of violence.

Strategy is not immutable theology, nor is it a one-time fix to a static problem which we can now put behind us. It is a process which includes an ongoing dialogue on strategic issues both within the Navy and without. I consider this report an important part of that dialogue, and have thus addressed strategy at some length. Further I consider the development and maturation of maritime strategy within the Navy a most significant accomplishment in itself. There is virtually no direct dollar cost associated with strategy development and application. In fact, it helps reduce costs since it serves to focus our resources on operations which match agreed strategic force employment concepts. And application of strategy is affecting every aspect of today's Navy: we are, in fact, building a Navy to meet maritime strategy requirements.

If you measure us against this strategy, I believe you will find that evidence of our accomplishments is clear. We have a Navy ready today to support a national maritime strategy, and it is getting better each day.

Naval Operations in Support of Strategy

The most telling indicators of the Navy's performance in support of national and maritime strategy have been our operational accomplishments at sea. In 1985, naval forces operated to protect U.S. interests from a variety of threats, build alliances and regional stability, deter war, and support diplomacy. Unlike some previous years, 1985 saw few crises requiring U.S. forces. But when crises affecting U.S. interests did occur, as in the ACHILLE LAURO hijacking, naval forces were on station and ready when needed.

A case study in flexibility, mobility, and utility of naval forces in support of national strategy is the deployment of the aircraft carrier SARATOGA and her battle group. Last August, SARATOGA left her homeport of Mayport, Florida, to participate in Exercise Ocean Safari 85, a major NATO operation exercising our capability to control the North Atlantic and secure vital sea lines of communication in time of war. It was the largest NATO maritime exercise ever held, involving some 160 ships. The exercise began with a convoy exercise departing Boston harbor, coordinated by the Commander, U.S. Maritime Defense Zone Atlantic, a Coast Guard admiral controlling Navy, Coast Guard, and merchant marine units. This arrangment was established by a recent agreement between the Commandant of the Coast Guard and me, another example of continuing efforts to maximize joint warfighting capability. Exercise Ocean Safari featured a carrier battle force which included three U.S. carriers, a British carrier and the battleship IOWA, and demonstrated the ability to conduct forward, multi-carrier, allied operations envisioned in maritime strategy.

The exercise lasted some two weeks, and included operations covering an ocean area from Bermuda to the fjords of Norway. SARATOGA departed the exercise at its mid-point, entering the Mediterranean Sea on 7 September to participate in Exercise Display Determination 85. This month-long, Mediterranean-wide NATO exercise involved forces from Italy, Turkey, Portugal, France, the United Kingdom, and the Netherlands. U.S. forces included two carrier battle groups (SARATOGA and CORAL SEA), and a Marine Amphibious Ready Group.

While this exercise was in progress, the cruise ship ACHILLE LAURO was seized by Palestinian terrorists in the Eastern Mediterranean. Units of the Sixth Fleet were on the scene and ready to respond as the act of piracy progressed. At the President's direction, F-14s from SARATOGA intercepted an airliner carrying the terrorists, and four murderers were shortly in custody. The details of this incident have been widely reported, describing the technical and tactical complexity of an operation which required real-time intelligence gathering and fusion, globe-spanning communications, and picking out a single airliner from among scores of other aircraft. I want only to re-emphasize that this was a joint operation, heavily dependent on crucial intelligence from non-Navy sources, without which there would have been no intercept. The Navy simply provided the sharp point for a joint spear, demonstrating again the mobility, availability, and range of capabilities which make naval forces frequent instruments of crisis response.

SARATOGA then made a well-deserved port visit to Dubrovnik, Yugoslavia. It was the first carrier visit to Yugoslavia in five years, supporting U.S. foreign policy objectives in the region as well as sustaining crew morale. On 14 November, SARATOGA transited the Suez Canal enroute operations in the Indian Ocean. On 15 January, SARATOGA returned to the Mediterranean in continued support of national requirements.

SARATOGA's deployment is typical of naval operations in support of strategy. The Navy is at sea, forward deployed around the world, carrying out the elements of peacetime strategy, and doing many of the same things which maritime strategy would require in war.

Operating Tempo

The requirements for forward presence and crisis response in support of national strategy led to an operating tempo even higher than during the Vietnam War. Optempo peaked in 1984 and declined in 1985. Still, it imposes three principal costs. First, it requires a substantial part of a tight budget. Second, extremely long periods at sea cause higher wear and tear on equipment, degrade material readiness and require additional resources. Finally, we see negative retention indicators caused by family separation.

The problem is amenable to solution because, over the past five years, the number and quality of ships and squadrons have grown significantly. As a result, we have established five firm standards for optempo reduction:

o Each ship and squadron will be in homeport at least 50 percent of the time between overhauls.

o Forward deployments will be no longer than six months.

o Turnaround times between deployments will be no less than twice as long as the deployment itself.

o Average optempo for the two forward deployed fleets will not exceed 50.5 days per quarter, 29 days per quarter for the two nondeployed fleets. These figures provide balance between the requirements to restrain budgetary costs, ensure adequate training, and meet commitments.

o Flying hours for tactical aircraft squadrons will be a notional 25 hours per crew per month. This includes flying during battle group operations as well as training and support flights.

The optempo reduction plan is a major effort to complement retention incentive programs you have approved and attack a principal factor in retention decisions: family separation. In addition to meeting personnel needs, reducing deployed time will provide us an opportunity to conduct types of training in our homeports and home waters that is not possible when deployed, such as training for integrated battle force operations envisioned by maritime strategy. The optempo reduction program is only possible, given our world wide commitments, because of a larger and qualitatively improved fleet. Moreover, it clearly presumes that no significant additional commitments occur.

THE NAVY TODAY: ACCOMPLISHMENTS IN TOTAL CAPABILITY

The Navy today is more able to support maritime strategy than at any other time in recent memory. Our capability is evident in the operations which I have described. It is equally evident in a fleet materially better prepared to fight and in capable people with a clear sense of purpose and dedication. Substantially improved funding since 1980 has paid huge dividends. Overall military capabilities of our ships and aircraft squadrons have soared over the past four years; personnel retention remains near all-time highs; weapons, sonobuoys, and spare parts stocks are up markedly. With the maritime strategy we can place these statistics in perspective, and assess our progress against strategy-driven requirements.

Let me now illustrate these observations by reviewing briefly some accomplishments of the past few years, describing current trends, and noting ongoing initiatives.

Total Military Capability

Assessing the Navy's total military capability to respond to national requirements is a complex task. Any assessment must consider four basic "pillars" of military capability. First, ships and aircraft must have the full range of inputs -- integrated logistic support (ILS) in its broadest sense -- to be able to perform the tasks and missions for which they were designed. Second, Navy must possess the proper number, size and types of units to carry out requirements of strategy (force structure). Third, these units must have up-to-date weapons systems and technical sophistication to match a likely threat (modernization). Fourth, they must have staying power to wage protracted war (sustainability).

The pillars of military capability must be carefully balanced, because deficiencies in any one could create exploitable vulnerabilities. A fully manned and trained flotilla of obsolescent coastal patrol boats is no more capable of countering threats to U.S. interests than a sophisticated battle fleet without ammunition, fuel, or trained personnel. Considered together, the four pillars provide data which show dramatic improvement in our overall operational readiness to carry out warfighting tasks against any potential threat.

Integrated Logistics Support Readiness. The most complex element of total military capability is the day-to-day ability of ships and squadrons to perform as designed. One way to look at this is to aggregate selected logistic support inputs -- personnel, equipment, supply support, and training levels -- across mission areas which a ship or unit must perform, such as anti-air warfare or anti-submarine warfare. Based on this aggregate assessment, a unit can be assigned one of four levels ranging from fully ready to not ready. We ensure that as many ships and squadrons as possible remain at the two highest levels.

These aggregate assessments of readiness in selected logistic support elements provide just one index of the extent of the Navy's return on our 46 percent increase in readiness-related expenditures since 1980. As Figure 2 shows, the number of aircraft squadrons at the highest two levels has tripled, and the number of ships has doubled. This accomplishment is particularly striking when compared to pre-1981 negative trends.

Each sub-component of logistic support readiness has also shown marked improvements, with the personnel element showing the most noticeable growth. Since 1981, we have almost doubled the number of ships manned by crews with the quantity and quality of sailors required to operate the ship to its warfighting limits. Similarly, aviation squadrons in this personnel category increased 16 percent and all submarines have maintained this level in the last two years. This personnel index gauges not only the number of sailors aboard a ship, but their skills and experience. Obviously, this indicator cannot be "fixed" with one appropriation. It has taken years of successful recruiting, training, and retention to arrive at acceptable personnel levels.

The training element of logistics support readiness measures a ship or squadron's preparations to perform its warfare missions, measured primarily through operational drills and exercises. We have made great strides in developing a Navy training strategy that supports the types of operations we envisage in maritime strategy. Clearly deficient areas, such as reserve training, physical security and anti-terrorist training, and battle group tactical training, were specifically strengthened last fiscal year. Improvement efforts are supported through the Fleet Training Assessment Program, which monitors effectiveness of training programs and targets specific areas requiring reinforcement.

The equipment element of logistics support readiness has improved substantially. In 1981, the average surface combatant had at least one major mission-degrading casualty 58 percent of the time. In 1985, this number decreased to 43 percent with the trend continuing. Improved supply support is an important element of this trend. Spare parts availability has improved dramatically, as Figure 3 illustrates for afloat aviation squadrons. Because of similar improvements fleet-wide, we have reduced the amount of time we wait for repair parts in major

Figure 2

IMPROVEMENTS IN LOGISTIC SUPPORT READINESS

SHIPS, SUBMARINES, AND AIRCRAFT SQUADRONS IN TOP TWO AGGREGATE LEVELS

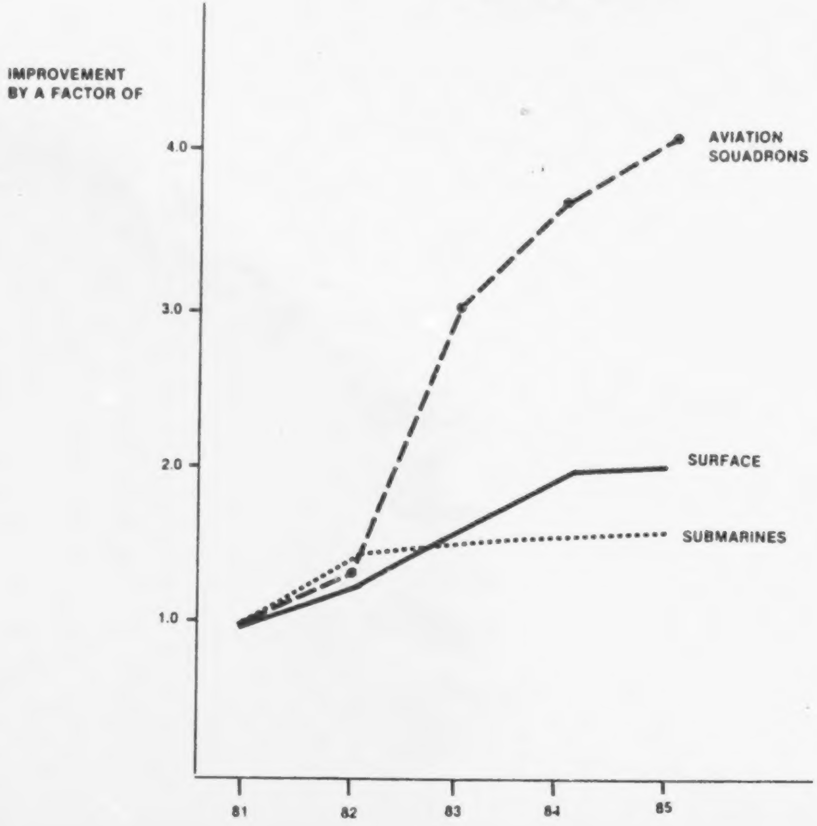
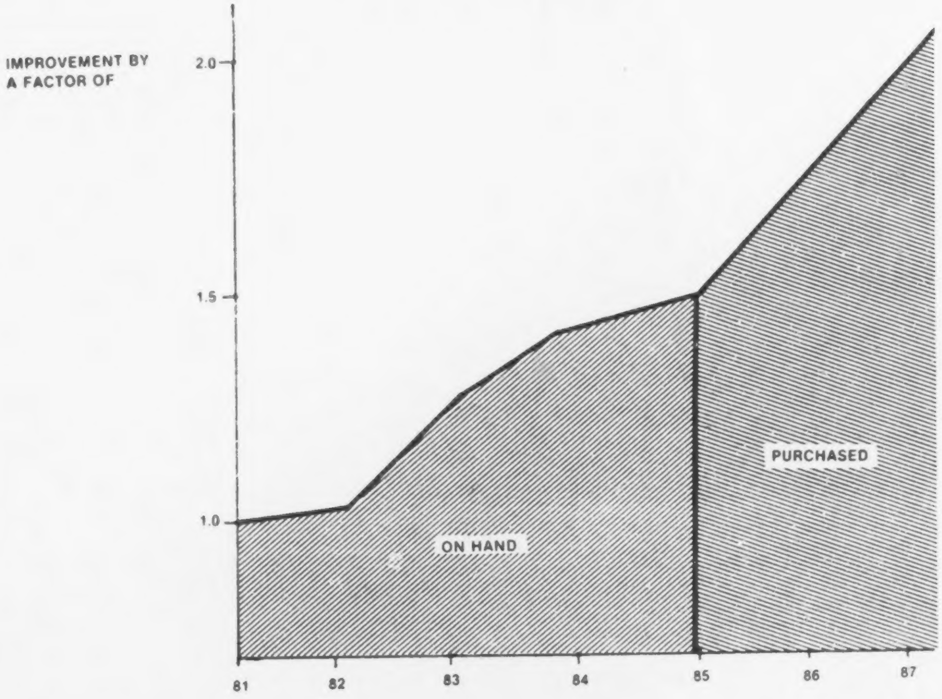


Figure 3

IMPROVEMENT IN SPARE PARTS AT SEA (AVIATION)



casualties by 35 percent since 1981, and improved the initial availability of these parts by almost as much.

Because our crews are more experienced and better manned, our ability to repair our equipment has improved dramatically. Experienced repair technicians aboard ship can now quickly effect repairs which previously would have required outside assistance. Four years ago, the average carrier deployed with some 60 civilian technicians embarked to repair equipment casualties beyond the capability of Navy technicians. In fiscal year 1987 we will deploy carriers without any civilian technicians embarked for the first time in recent memory.

Sustained and balanced improvements in integrated logistics support readiness funding have produced steady recovery in the fleet's preparedness. Investments in high quality personnel, spare parts, and training over the past few years are reflected in logistics support readiness levels approaching those which we can and must sustain over the long term.

Force Structure. Perhaps the most visible component of the Navy's improving military capability has been the dramatic growth in numbers and capabilities of ships and aircraft. From 479 deployable battle force units in 1980, we have grown to 547 today, and you have approved the remaining ships necessary to reach the 600-ship goal by 1989. We are building a balanced Navy which will be able to control vital sea areas on a global scale, deny the Soviet Union the ability to concentrate its considerable assets in one theater, and meet the extensive commitments of peacetime strategy. The increase in force structure and capability is one of the true success stories of the defense buildup.

Now that a 600-ship Navy is funded, there are questions about whether a large and balanced force structure can be sustained. Let me put this issue in perspective. Real funding for force structure actually peaked in FY-83, reflecting sharp increases needed to correct the neglect of the 1970's. Now that we have corrected force structure shortfalls, we can move into a sustaining phase where, by building about 20 ships each year, we can sustain a 600 ship Navy indefinitely with minimal growth in force structure spending. The principal reason we can sustain this force structure at low cost is that we have largely recovered from past neglect and we have worked hard and effectively to force procurement costs down.

Specifics of our force structure improvements are summarized in Figures 4 and 5.

Navy's successful aircraft carrier building program is ahead of schedule and under budget. Commissioning of USS THEODORE

Figure 4

SHIP FORCE LEVELS

FORCE STRUCTURE AND MODERNIZATION TRENDS

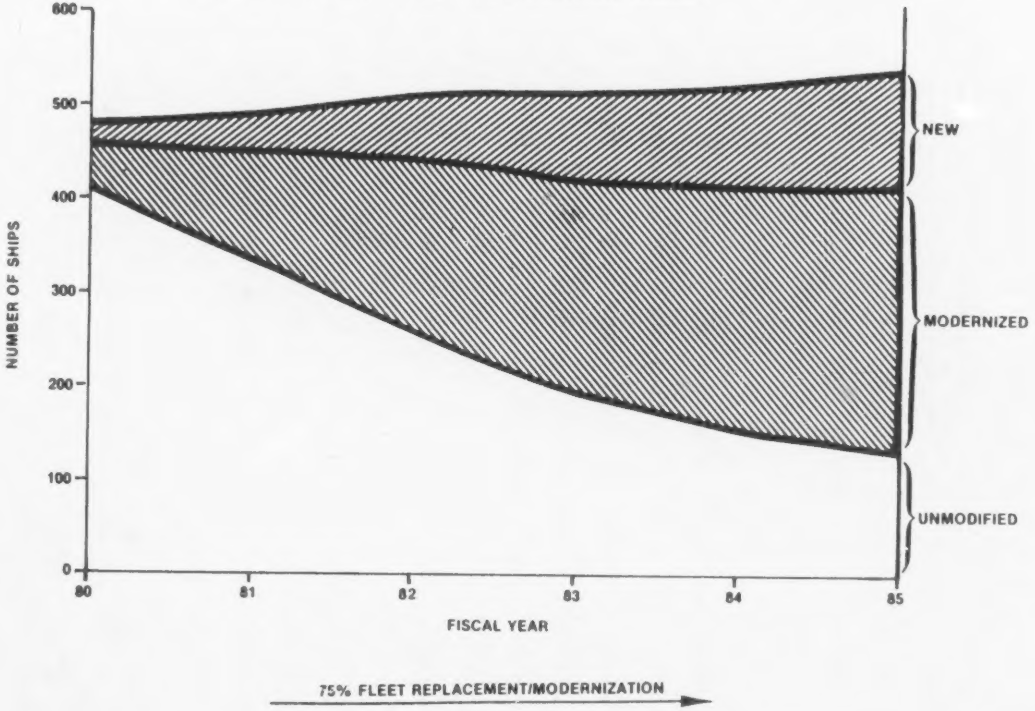
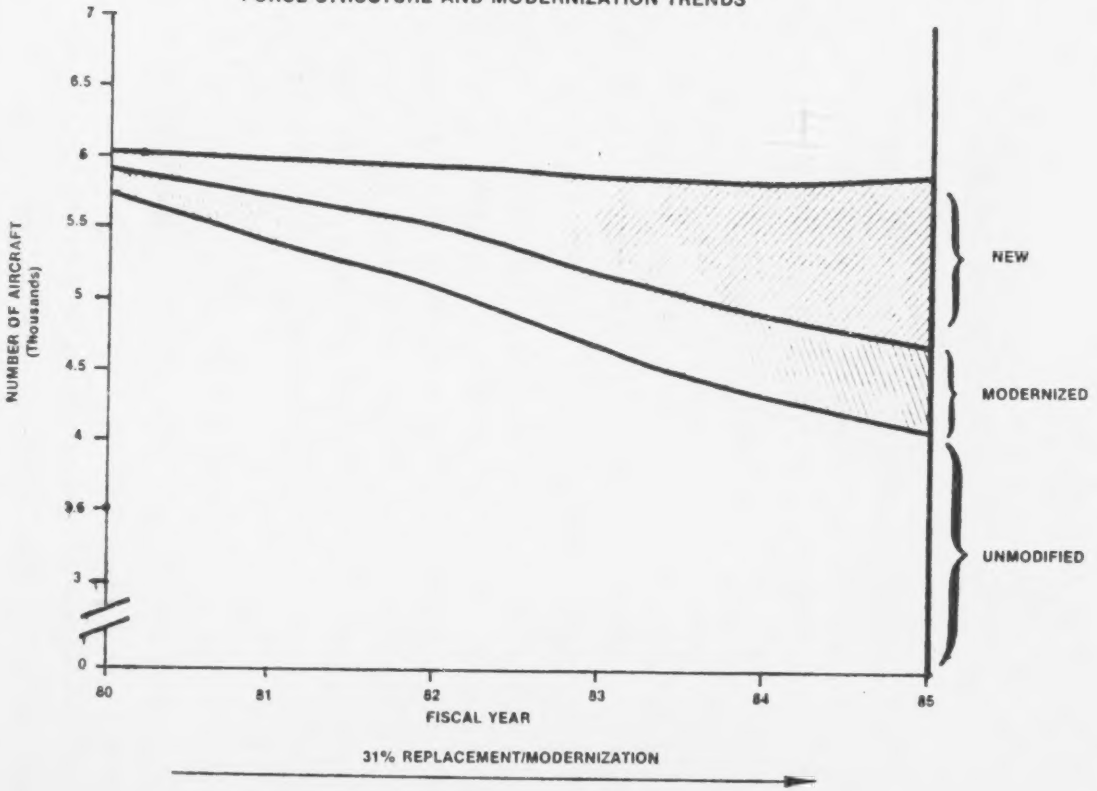


Figure 5

AIRCRAFT FORCE LEVELS

FORCE STRUCTURE AND MODERNIZATION TRENDS



ROOSEVELT (CVN-71) is planned for October of this year. ABRAHAM LINCOLN (CVN-72) and GEORGE WASHINGTON (CVN-73) are presently under construction with delivery in 1989 and 1991 respectively. Last spring, USS FORRESTAL (CV-59) became the second ship to complete the carrier service life extension program (SLEP), which is adding 15 years to the lives of older aircraft carriers. USS INDEPENDENCE has commenced SLEP and USS KITTY HAWK is scheduled to begin in FY-88.

Last year, the seventh OHIO class Trident submarine was delivered and the 13th was authorized and funded. The addition of these ships, combined with the introduction of the Trident D-5 missile in 1989, will maintain the survivability and assured retaliatory capability of strategic offensive forces. Fifty-two LOS ANGELES class attack submarines have been appropriated. The most recent of these ships incorporate many improvements, including vertical launch system for TOMAHAWK missiles, enhanced Arctic capabilities, improved quieting and sophisticated new weapon systems.

The contributions of the battleship NEW JERSEY in a globe-spanning deployment have validated the President's decision to bring these powerful ships back into service. Addition of TOMAHAWK and HARPOON missiles to the awesome firepower of the 16-inch gun battery make these ships highly cost effective additions to the fleet. Battle groups (BBBGs) centered around these ships will be employed to maximize their deterrent value in peacetime as an incremental response in crisis situations. BBBGs will be employed either independently or integrated with carrier battle forces, dependent upon the level of potential enemy threat, availability of land-based air support, and other factors. In certain situations, battleships may add flexibility to carrier forward deployment schedules while providing an important capability in maritime strategy.

The fourth CG-47 TICONDEROGA class guided missile cruiser was commissioned and three more were authorized last year. This brings to 19, of a planned total of 27 ships, the number of these highly sophisticated warships which have been approved. Major upgrades being incorporated into the CG-47 class include the vertical launch system, which will accommodate a greater number and variety of missiles in a reliable and survivable configuration; the SQQ-89 ASW system, which adds new sensors and processors and provides for integration of ASW data; and the SPY-1B radar, which provides the capability to handle an even more demanding AAW environment. The Aegis combat system installed in the TICONDEROGA class cruiser will counter the full spectrum of forseeable anti-ship missile threats. Performance of Aegis combat systems has been successfully proven under the most rigorous test conditions, and in extended real-world operations. With the addition of TOMAHAWK, the strike warfare capability of these ships will be enhanced.

The lead ship of the DDG-51 ARLEIGH BURKE guided missile destroyer class was authorized and funded in fiscal year 1985. It will replace the aging DDG-2 and DDG-37 class ships which will begin to retire by the end of the decade. ARLEIGH BURKE will be the most powerful destroyer ever built, with the Aegis combat system, vertical launch missiles, TOMAHAWK, and HARPOON as well as a 5"/54 gun, the Close-in-Weapon System (CIWS), ASROC and torpedoes.

Amphibious forces have been an important part of the building effort. WHIDBEY ISLAND (LSD-41) class landing ship dock is designed to transport four landing craft air cushion (LCAC) vehicles and will add flexibility to the amphibious assault capability of the Navy-Marine corps team by permitting high speed attack of hostile shores from over the horizon. Last year, the lead ship of the class was commissioned, and the final two units were funded.

LHD-1 WASP class is a multi-purpose amphibious assault ship designed as the most versatile amphibious ship ever built. Intended as a replacement for the aging LPH class helicopter assault ships, WASP will significantly increase our lift capability, provide a flight deck for helicopters and vertical/short takeoff (VSTOL) aircraft and a well deck for air cushion and conventional landing craft. The first ship in the class was funded in the fiscal year 1984 budget and will be delivered in 1989. Last year, a second LHD-1 class ship was authorized and funded.

The MCM-1 AVENGER, funded in the FY-82 budget and being delivered in 1986, is the first mine countermeasures ship to be built for the U.S. Navy since the 1950s. She has a wooden hull and non-magnetic machinery and incorporates latest state-of-the-art navigation, minehunting and mine neutralization equipment. Ships authorized in FY-86 will bring to 11 the total number of units. All of these ships will be assigned to the Naval Reserve.

To complement the AVENGER, the Navy requires a class of small but sophisticated mine countermeasures ships designed to clear U.S. ports in wartime. The lead ship of the CARDINAL class was awarded in 1984 and will be delivered in 1988. This minesweeper/hunter will have an innovative design: a surface effect ship with a glass reinforced plastic hull. These will also be Naval Reserve ships.

Seven TAGOS ocean surveillance ships are in commission, and a total of 16 are funded. Early results from these ships and their towed array sonars have been impressive. We are switching from a conventional monohull design to a small waterplane area twin hull (SWATH) design to give us better capability to operate under adverse weather conditions. The lead SWATH ship was approved last year.

Our program to maintain aircraft inventories with the proper mix and numbers remained on track, with 244 new aircraft delivered in FY-85. The total aircraft inventory has not increased markedly, as Figure 5 shows, but capability of the force has increased dramatically. F/A-18 and F-14A continue to replace older aircraft, and new models of A-6 attack aircraft, E-2 airborne early warning, and P-3 maritime patrol aircraft replace older models. Last year, the F/A-18 was integrated with a second carrier, USS CORAL SEA. F/A-18 is proving to be the most easily maintainable high performance jet in the world. USS MIDWAY is scheduled to deploy with the F/A-18 in 1986.

Capabilities of the battle group will be enhanced by the SH-60F helicopter, designed for inner-zone anti-submarine protection. The contract for this sophisticated ASW platform, to replace the aging SH-3, was signed last year. We will embark on full scale development of V-22 OSPREY this year with first flight anticipated in early 1988. This new aviation concept marries helicopter versatility with conventional turbo prop speed and range. It will give Navy and Marine Corps capability to perform a wide variety of missions using a common airframe.

Improvements in sealift are even more dramatic. By the end of 1986, all eight SL-7 fast containerships will have been modified to roll-on/roll-off configuration, providing the ability to deploy rapidly an entire heavy division. All three Maritime

Prepositioning Ship groups will be deployed, providing for rapid deployment of an entire Marine Amphibious Force. Government controlled sealift has grown 30 percent since 1980 and will double again during this five-year plan.

Modernization. To stay ahead of rapidly improving threats, our fleet modernization program is aimed at providing ships and aircraft already in the inventory with improved warfighting and engineering systems. During the past year, we took specific actions to integrate all modernization efforts, strengthening the Ship's Characteristics Improvement Board and establishing a corresponding Aircraft Characteristics Improvement Board to focus and prioritize our efforts. Our Naval Warfare Directorate plays an increasingly important role, ensuring that modernization programs address priority warfighting requirements. Requirements are based on the maritime strategy and are established from a cross-platform viewpoint that avoids piecemeal solutions to an integrated warfare problem.

During FY-85, we performed 121 major systems upgrades on a wide variety of fleet units. Several attack submarines were configured to fire the TOMAHAWK missile, even more had sonar systems significantly improved. Other programs qualitatively enhanced the capabilities of our carrier force by providing selected carriers better defense against air and subsurface threats with the Close-In Weapon System (CIWS), MK-36 Decoy

Launcher, Target Acquisition System MK-23, and NIXIE Torpedo Decoy system. Surface combatants were provided defensive systems in the form of CIWS and NIXIE, and the offensive capability of TOMAHAWK.

Sustainability. Ability to fight a protracted conflict is central to maritime strategy. Consequently, we constantly analyze the mix and amounts of ordnance required to support our strategy, through wargaming simulations, doctrine reviews, projected combat sortie rates, and other analyses. Although we have not yet reached all goals in the area, sustainability has been and continues to be the fastest growing part of our budget, going from 4 percent of TOA in 1980 to about 10 percent at present. Ordnance funded over the last four years is beginning to deliver in numbers and fill our magazines. Our stocks of sonobuoys, crucial to countering the increasing Soviet submarine force, are also on the upswing. As Figure 6 shows, we have made substantial progress, and ordnance already funded will soon improve the picture even more substantially. In some categories, our weapons stocks have doubled from the low levels of 1980 and will double again by the end of the decade.

Total Preparedness to Carry Out Navy Missions. The integration of the four pillars defined above comprises our total military capability. For example, it would take a squadron of older cruisers to approach the offensive and defensive

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capabilities found in one of today's Aegis cruisers, so numbers of ships alone do not tell the whole surface ship story. Similarly, no platform on earth has the strategic striking power of an OHIO class TRIDENT submarine, and again, numbers of ballistic missile submarines alone do not tell the real strategic story. Rather, it is the synergism of all facets of total military capability that needs to be reviewed when measuring our progress. I believe that this systematic and balanced approach to defense spending has resulted in improved fleet capability and preparedness in every qualitative and quantitative sense.

Personnel Accomplishments

The most dramatic recovery of the last five years is the resurgence in spirit and capability of our people. On any given day, there are more than one hundred thousand sailors, young men and women who are truly dedicated professionals, underway on ships in defense of freedom. People are our greatest success story and the main reason that our Navy has never been in better shape during my 36 years of commissioned service. Personnel accomplishments have been built on twin foundations of successful recruiting and improved retention. While we continue to be successful, some negative trends now cause concern.

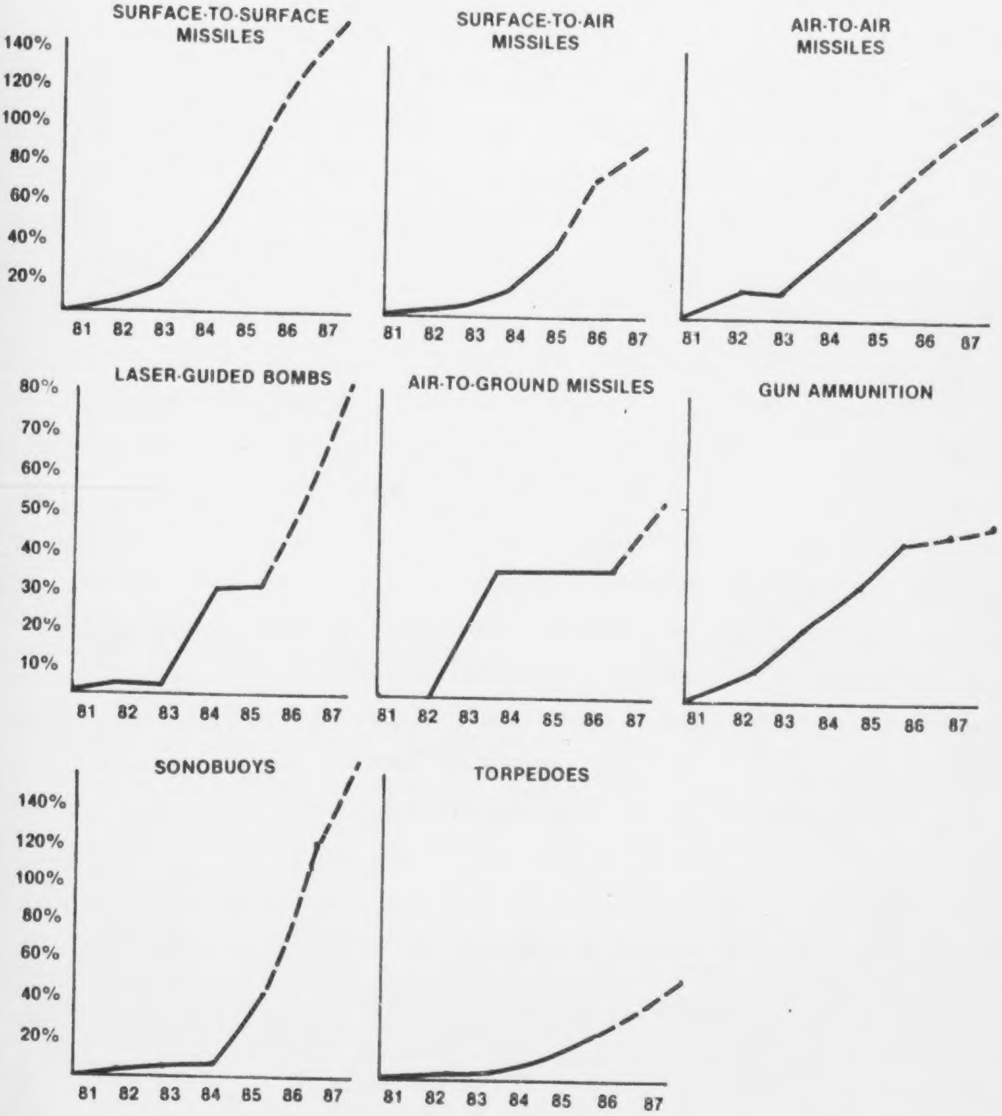
Recruiting. September 1985 marked the 70th consecutive month for achieving recruiting goals in all enlisted programs.

Figure 6

ORDNANCE SUSTAINABILITY IMPROVEMENT

PERCENT INCREASE IN STOCKS ON HAND
(Base Year: FY 81)

LEGEND: _____ ON HAND _ _ FUNDED



On the other hand, while we continue to reach our goals, FY-85 was a tough recruiting year and quality declined slightly from the high water mark of FY-84. A primary bellwether of recruiting trends is the Delayed Entry Pool (DEP), the group of recruits who have agreed to enlist at a later date. This pool, composed largely of high-quality high school graduates, provides a recruiting buffer, serves as a management tool to optimize loading of training facilities, and provides sailors who historically have the highest potential for success in the Navy. Annual changes in the DEP therefore have wide-ranging impacts. Since the total contracts written last year were again fewer than accession needs, the Navy was forced to draw from the Delayed Entry Pool to achieve the required quantity. DEP decreased by 5,884 applicants in just one year as shown in Figure 7. This drawdown of the Delayed Entry Pool is not only a significant indicator of an already more difficult recruiting environment, but also foretells potential problems in the quality level of future accessions. The DEP is not simply a pool from which to draw in difficult recruiting months, it is key to our ability to recruit highly qualified young men and women over the long haul and channel them into technical training at the appropriate time.

Retention. One of our greatest achievements and continuing challenges has been retaining quality personnel needed to man a 600-ship Navy. As shown in Figure 8, we have continued to do well, although we did not achieve the high retention rates of

FY-84. We have significantly reduced undermanned ratings from a high of 62 in FY-82 to the present 28, out of the Navy's total of 102.

Selective Reenlistment Bonus (SRB) program has been a key component of our successful retention program. We have been able to provide adequate incentives for critical ratings at a time when employment opportunities outside the Navy are increasing. For these highly technical specialties, it is clearly less expensive to keep trained personnel in the Navy with SRB than to recruit new personnel of comparable quality, provide them extensive technical training, and develop their practical skills on the job. It was gratifying to see a recent GAO report confirm that Navy is managing SRB well. We concur with GAO's observation that SRB could be even more cost-effective if Congress would approve a return to the lump-sum method of payment. The authority granted to pay 75 percent is a step in the right direction.

Officer retention has also shown strong success over the past four years, although we saw disturbing trends in FY-85. Retention decreases for surface, nuclear surface, and pilots are of particular concern. The challenge to retain midgrade officers will be increased in a steadily improving economy.

Figure 7

DELAYED ENTRY POOL TRENDS

SIZE OF DEP AT BEGINNING OF FISCAL YEAR

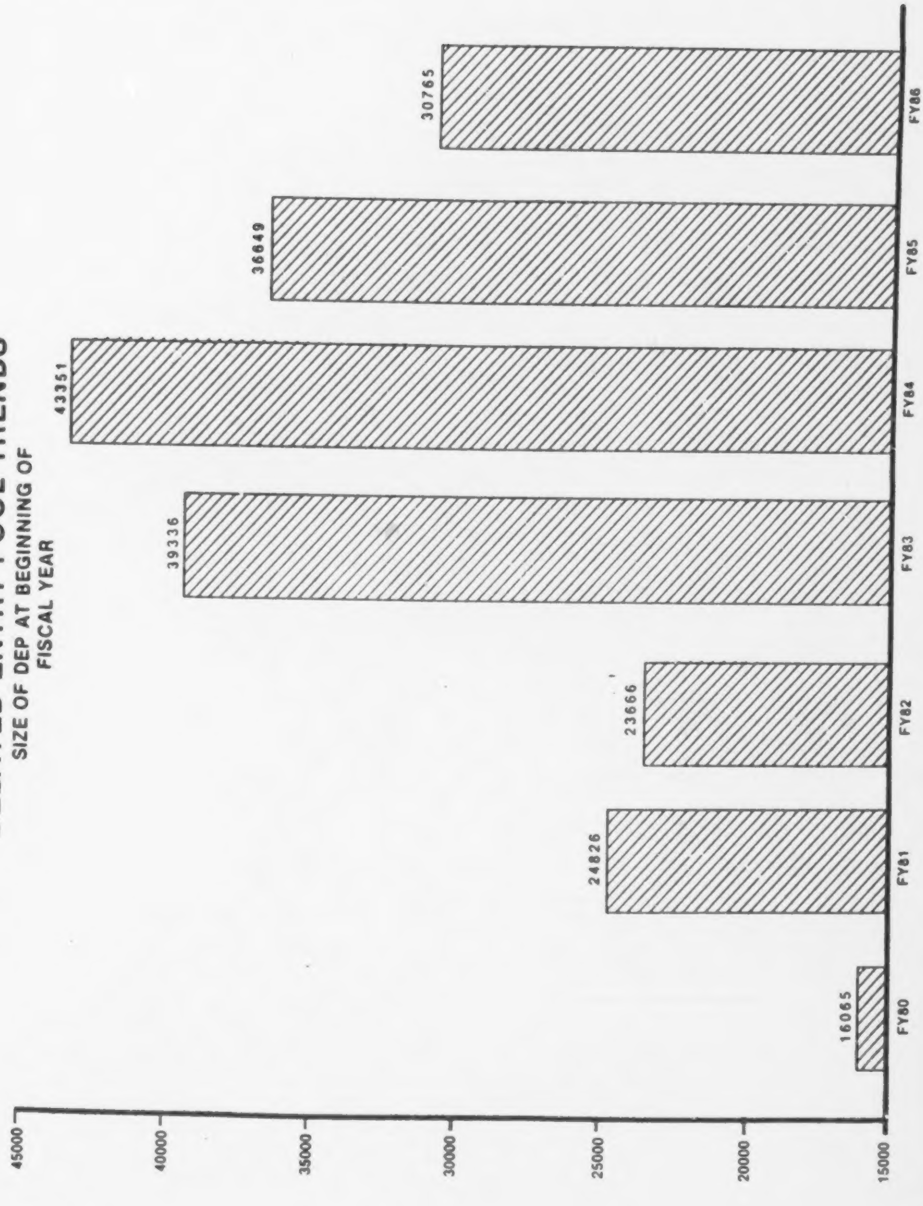
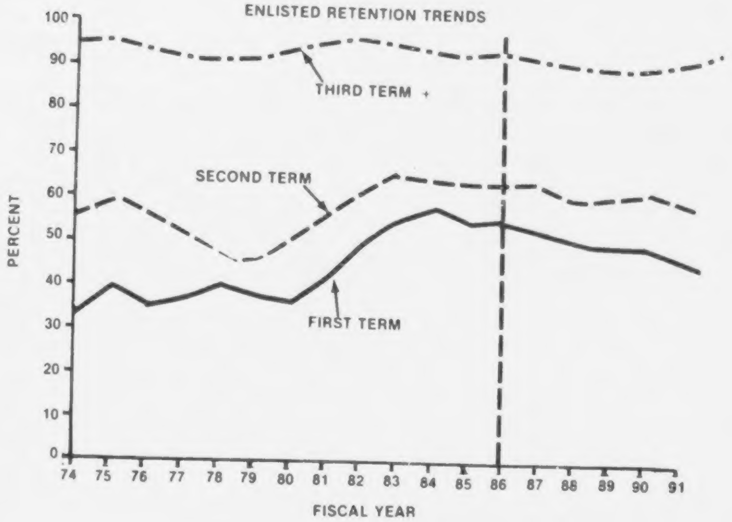


Figure 8

ENLISTED RETENTION RATES

	FY-82	FY-83	FY-84	FY-85	FY-86 PROJ
1st Term	50.3%	55.7%	58.0%	54.6%	55.5%
2nd Term	63.0%	65.4%	64.4%	63.9%	64.7%
3rd Term	95.3%	96.6%	94.9%	93.4%	94.3%



UNRESTRICTED LINE OFFICER RETENTION RATES

	FY-82	FY-83	FY-84	FY-85	FY-86 PROJ
Surface	43%	45%	50%	47%	47%
Surface (Nuclear)	21%	45%	42%	39%	39%
Pilot	49%	58%	56%	53%	48%
Naval Flight Officer	73%	74%	81%	73%	74%
Submarine (Nuclear)	39%	46%	47%	48%	48%
General Line	44%	60%	59%	64%	63%

Manning. The Navy's highest priority is to ensure that its fighting units are fully manned to sustain combat operations for the duration of any likely deployment contingency. About fifty-four percent of total strength of 581,300 men and women are now assigned to strategic, tactical and mobility forces compared with 48.9 percent in 1979. This sizable improvement in our "tooth to tail" ratio makes us a more formidable fighting force. However, growth in Navy end strength has not kept pace with force structure increases as we build to 600 ships. This has exacerbated a manning problem in fleet support installations and various shore activities, and, unless corrected, raises the prospect of undermanned ships as more are delivered. As our experiences of the late 1970s indicate, undermanning is sure recipe for serious readiness decline.

Quality. The improved quality of our personnel has been evident in many accomplishments including an associated substantial decline of disciplinary problems. First term enlisted attrition in FY-85 decreased to about 11 percent from 25 percent level of the late 70s. We have had the luxury of discharging consistently marginal performers through our Project Upgrade initiative, but improved force quality permitted us to discharge significantly fewer in each year of the program, starting with almost 5,000 in FY-82 and improving to only 441 in FY-85. The desertion rate has also declined. The FY-85 rate of 10.1 per 1000 is the lowest the Navy has experienced since 1972 and is only a fraction of the FY-77 level when we experienced a high of 31.6 per thousand. Similarly, the unauthorized absence (UA) rate continued to improve with FY-85 being the sixth consecutive year showing a decline. The FY-85 UA rate of 32.7 per 1000 was 25 percent better than last year's rate and 60.8 percent better than FY-79.

An aggressive, tough, but fair approach to alcohol and drug abuse has shown concrete results. Since 1980, when surveys indicated 48 percent of our E1-E5 population were using marijuana, there has been a steady and significant decline. Today, we use the most sophisticated testing system available and less than 3.0 percent of urinalysis tests being conducted Navy-wide are confirmed positive. As we eliminate the drug culture from the Navy, standards for retention are getting higher. Rehabilitation for drug dependency is now being offered only to those petty officers who exhibit exceptional potential. As a result of this new policy, two treatment facilities in San Diego have been combined into one. We are also consolidating Counseling and Assistance centers (CAACs) and Navy Alcohol and Drug Safety Action Program (NADSAP) facilities where feasible. We have been able to shift the Navy's focus and a half million dollars from drug rehabilitation to drug prevention programs.

Naval Reserve Personnel. Stimulated by horizontal integration of Reserve assets into the Total Force, reserve manpower has steadily increased since 1982. In 1983, the Sea and Air Mariner (SAM) program was developed to access non-prior service reservists into the Selected Reserve to fill E1-E3 mobilization billet requirements. To meet Selected Reserve junior officer requirements, we have created the officer adjunct to this program to access college graduates and provide them basic qualification training. We have also made a good start on efforts to improve the Individual Ready Reserve (IRR).

Quality of Life

Family considerations have a tremendous impact on the retention and readiness of our active duty forces, and meeting family needs is of vital importance in keeping the fleet ready. Recently, a national business magazine carried an article entitled "Ten Terrific Employers." The article noted the best employers not only took care of their people but took special care of their families as well. It came as no surprise to me that one of the "terrific employers" was the United States Navy. Let me provide you a few of the reasons.

A strong Family Support Program includes assistance to members and their families delivered through a network of Family Service Centers (FSCs) first funded in FY-81. Sixty-three are in operation and by the end of FY-87 all of the planned seventy centers will be open. In a recent three month period FSCs assisted approximately 250,000 people. I am also proud of our child day care initiatives. Navy centers now provide child care for over 15,000 of our sailors' children daily, and we have undertaken Family Home Day Care initiatives to begin meeting excess demand.

We will build 845 units of Military Family Housing in FY-86. Our long-range construction plan will reduce our buildable deficit of 11,600 units to 4,776 units by FY-91. We have averaged nearly 7,000 spaces of new Bachelor Housing construction over the last three years. In both programs we are dedicated to providing adequate housing to members and their dependents, with special emphasis on our more junior personnel and those assigned to extremely high cost of living areas.

Congress has suggested that the Department of Defense seek more third-party financing for military housing construction where life cycle cost analyses indicate overall savings. In September 1985 we negotiated the first such arrangement, validated as economical by the Office of Management and Budget. It was submitted for approval to the four Defense MILCON Subcommittees, but was deferred by the HAC with a suggestion that we renegotiate for lower costs. There are indications that even if successful, we will continue to encounter scepticism in the HAC Defense MILCON Subcommittee. I seek support of Congress to continue this program into execution where economically advantageous.

Congressional initiatives to ease the financial burdens on sailors' families during their moves, many to the highest cost areas of our country, have been enthusiastically received. Moves usually cost Navy families significantly more than their moving allowances and are a major disincentive when families consider reenlistment. Expanded allowances have reduced but not eliminated the shortfall. The authority to pay expanded allowances for temporary lodging, increased travel and transportation allowances, and advance payment of housing-related allowances are responsible for ground gained in this area. I ask for your commitment to continue to strive for reimbursement equity of uniformed Navy men and women with their Federal civilian counterparts.

The Dental Insurance Program proposed for active duty dependents has received wide support in the fleet. Such a contributory enrollment-type plan is evidence that we care about families' well-being and are prepared to assist in defraying the cost of dental care they require and deserve.

In addition to the family programs I have described, we have undertaken a variety of efforts to improve quality of life in the ships of the fleet. Health care professionals regularly visit all operational units to provide command programs in fitness, stress management, nutirition, smoking cessation and weight control. Shipboard exercise rooms are proliferating as command fitness coordinators implement the Navy's Fitness for Life initiative, created as a positive alternative to drug and alcohol abuse. Only by making an on-going commitment can we continue to attract and keep the quantity and quality of personnel needed.

Total Force Improvements

The Navy's total manpower needs result directly from requirements of the maritime strategy. However, the size and composition of the active Navy are constrained by affordability and attainability limits, requiring intelligent use of our Reserves. We have moved forward aggressively to integrate and maximize Reserve contributions while ensuring that no missions are transferred to the Reserves which either result in a net degradation of readiness, cannot be supported by available Reserve manpower, or are costlier than leaving them with the active forces.

The focus of this process is "horizontal integration." Front-line ships and aircraft now compose a high percentage of the Reserve inventory, including increasing numbers of Reserve OLIVER HAZARD PERRY and KNOX class frigates. Both Reserve carrier air wings already fly or are programmed to receive fleet compatible state-of-the-art fighter, attack, and surveillance aircraft. Additionally, we have programmed new medium attack A-6E and EA-6B squadrons for Reserve wings so they will be completely modernized in synchronization with delivery of the two newest aircraft carriers. The day-night cycle flight operations by a Reserve air wing aboard USS RANGER in January of this year have demonstrated the progress of horizontal integration. The squadron augment unit (SAU) program initiated in 1984 integrated Reserve training into active fleet units and increased total force readiness. SAU air crews not only fly the same aircraft but also perform annual active duty for training with their gaining squadrons. I intend to continue and expand the number of participating Reserve aircrews. One-third of the P-3 ORION Maritime Patrol Aircraft squadrons are in the Reserve. These squadrons fly the modern P-3 ORION TACNAVMOD aircraft which allows Reserve flight crews to deploy and operate side by side with active squadrons.

The planned transfer of 25 additional active ships and the introduction of 31 new mine warfare ships and 22 craft of opportunity by 1992 is particularly ambitious. Trends in combat readiness for surface units already in the Reserves are gratifying. Four years ago, only one Reserve surface ship in five reported combat ready. Today, three out of four are in that status.

Establishment of Maritime Defense Zones (MDZ) is an important new initiative involving reserve and active units from the Navy and Coast Guard. MDZ commands have responsibility for protecting U.S. harbors and coastal sea lines of communication during major conflicts. Analysis has shown many existing Naval Reserve Units, such as Craft of Opportunity, Inshore Undersea Warfare, Mine Countermeasures, and Naval Control of Shipping units are able to contribute to this coordinated effort. In addition, in the event of mobilization, Naval Reserve coastal defense units will augment Coast Guard headquarters and sector command staffs.

Accomplishments in total force management are crucial to carrying out the maritime strategy. We have developed a system that ensures that we can wisely incorporate a growing reserve into the total force. However, there are limits on our reliance on the naval reserve which relate to availability during periods of crisis. The President's 100,000 call-up authority is insufficient to provide Navy the requisite augmentation, in both size and type, during a period short of war. Because of this, reserve integration becomes more difficult and must be approached with caution to ensure readiness to meet reasonably foreseeable requirements is maintained.

SUSTAINING ACCOMPLISHMENTS: NAVY INITIATIVES

Responsible stewardship of taxpayers' money is essential to maintaining the trust and confidence of the American people. It is truly ironic that while the public has been treated to a succession of procurement "horror stories" that total less than one million dollars over two years, the Navy has undertaken ambitious initiatives which have returned to the Congress, for their reallocation, billions of dollars. Navy has a solid track record of keeping the public trust, and a record of innovation in using funds more efficiently. We are proud of leading the assault against the old ways of doing business and are committed to future improvements. We should be allowed freedom to optimize the process that results in over 3 million contracting actions annually.

Navy Acquisition Management

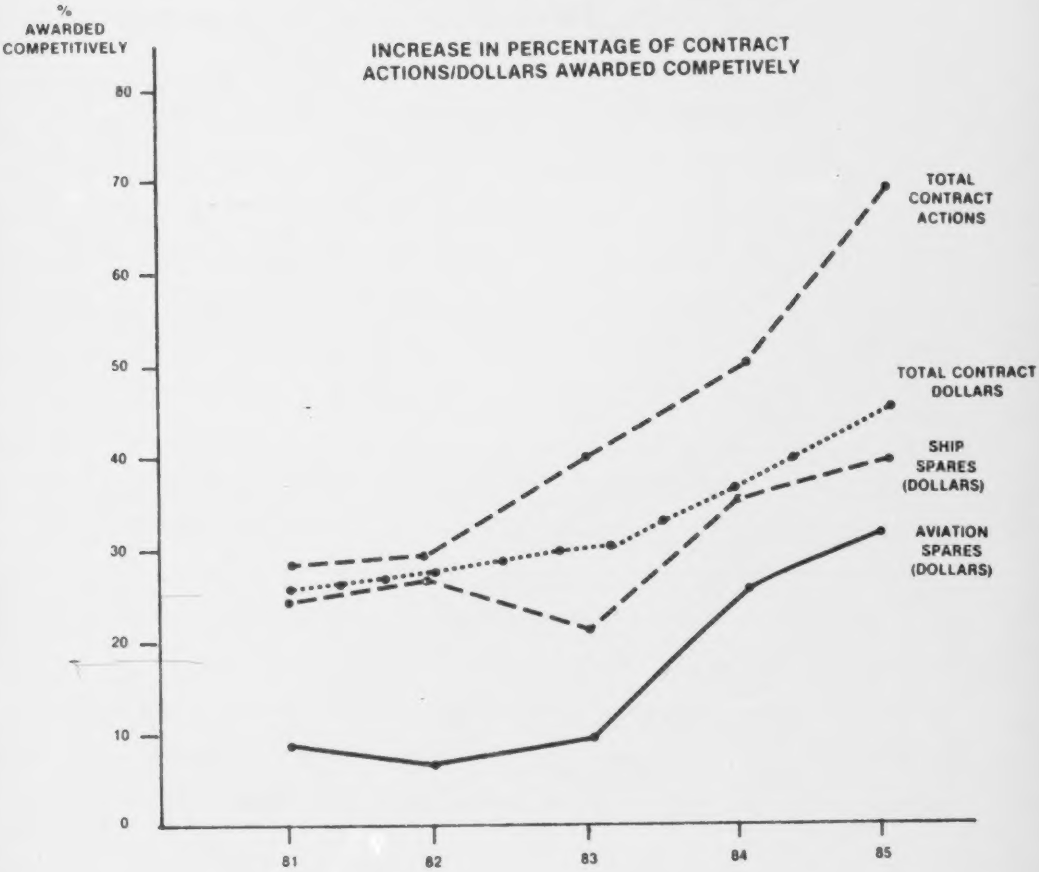
Competition and Cost Trends. An ongoing success story is our progress in using procurement competition to advantage. The Navy's turnaround in competition performance since 1982 is graphically portrayed in Figure 9. For FY-85, we awarded 45 percent of all contract dollars and 69 percent of all contract actions competitively. In dollar terms, this meant we awarded $20.2 billion competitively, an increase of $5.7 billion over FY-84 and almost $11 billion over FY-82. In the shipbuilding and repair industry, the percentage of dollars awarded competitively has increased from 15.7 percent in 1980 to 84.3 percent in 1985. The establishment of the flag-officer position of Competition Advocate General of the Navy, long before such positions were required by public law, has proved to be a wise decision and an important part of success in competition.

Results of the project to Buy Our Spares Smart (BOSS) are heartening. After two years in operation, the program has screened 225,658 spare parts, breaking out 30,347 of them from the original equipment manufacturer for full competition or direct buys and contributing to a total cost avoidance of $347.5 million. In addition, the "Price Fighter" initiative has reviewed over 3,600 items with cost savings of $2 million through a systematic determination of fair cost. In spare parts procurement we had our greatest competitive success, more than tripling the level of only two years ago.

Savings achieved through shipbuilding competition FY-83 through FY-85 exceeded $2.5 billion. $248 million was saved in the LOS ANGELES class nuclear attack submarine program and $840 million in the TICONDEROGA class cruiser program. Savings in the shipbuilding and conversion account have allowed us to accelerate several programs without having to use additional funds; for example, reactivation of the battleship MISSOURI was paid for with funds saved in other programs.

Figure 9

COMPETITION PERFORMANCE



Particularly in aircraft procurement, other initiatives also have reduced costs. Specification changes to existing contracts are approved only if they affect safety. This approach has reduced changes by about 95 percent. We buy what is essential for combat capability without contract changes and gold-plating. Introduction of fixed price contracts as the norm has also helped reduce the price for high performance aircraft. Results of these efforts are reflected in aircraft cost trends shown in Figure 10. These reductions should be considered with the knowledge that aircraft prices had gone up approximately 10 percent per year above inflation for almost 30 years.

Manpower, personnel and training costs account for more than one-third of the total life cycle costs of weapons systems. Opportunities to reduce life cycle costs occur early in system development. We have developed the capability to make hardware-manpower tradeoffs and to identify requirements at the earliest stages of system development, through the Navy HARDMAN Program. Commencing this fiscal year, the rigors of HARDMAN analyses will be applied to all new starts in all acquisition categories.

Materiel Professional Program. Procurement initiatives must be implemented by highly trained, competent people. In 1985 we instituted the Materiel Professional (MP) program, a new officer career path. The Navy "blue suiter" is absolutely essential to successful materiel management, providing continuity and an operational perspective. The MP career path is designed to develop the same level of professionalism in materiel management that we have in warfighting. This community now includes one Admiral (the VCNO), five vice admirals, and 49 rear admirals, as well as some 780 captains and over 70 senior commanders directly responsible for the management of the materiel processes. We are selecting quality officers, with training and experience to get the job done right.

Procurement Trends. Through a combination of improved management, competition, and lower than expected inflation, we are building a 600-ship Navy at much lower cost than originally expected, as Figure 11 shows graphically. When you hear stories about $400 claw hammers -- which, by the way, we discovered and never paid for -- I ask that you keep such stories in perspective.

I want to caution, however, that the difference between estimated and actual costs is being driven to a minimum. Our current budget requests fully reflect the expected results of management initiatives, competition, a buyer's market and lower inflation indices, and are thus unlikely to continue the magnitude of cost savings experienced in previous years. If Congress continues reducing prior-year programs, as was done in the FY-86 continuing resolution, or acts on the expectation that additional unobligated funds will be generated in the FY-87

Figure 10

AIRCRAFT RATE ADJUSTED COST TREND

UNIT RECURRING FLYAWAY COST
(CONSTANT 1986 DOLLARS)

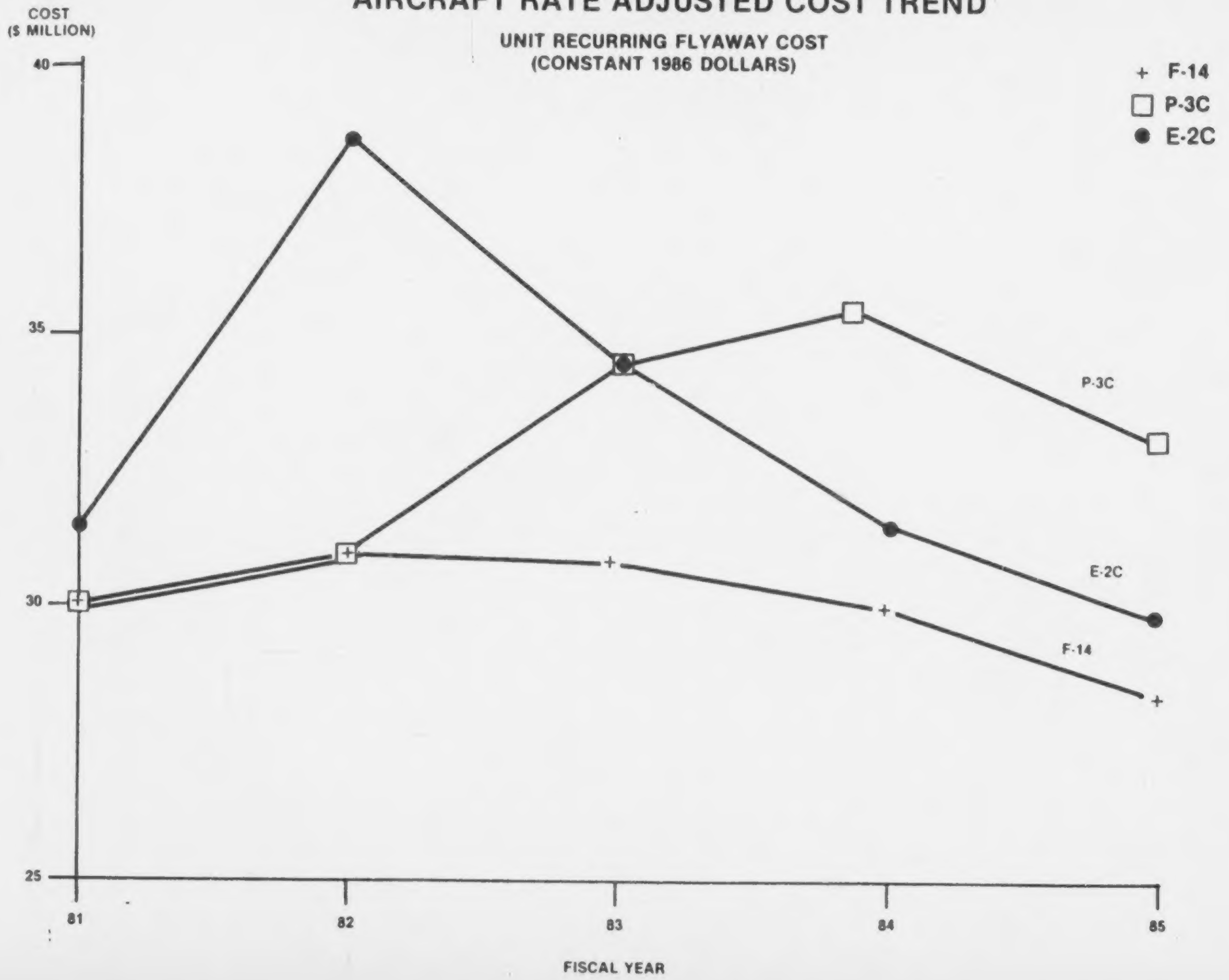
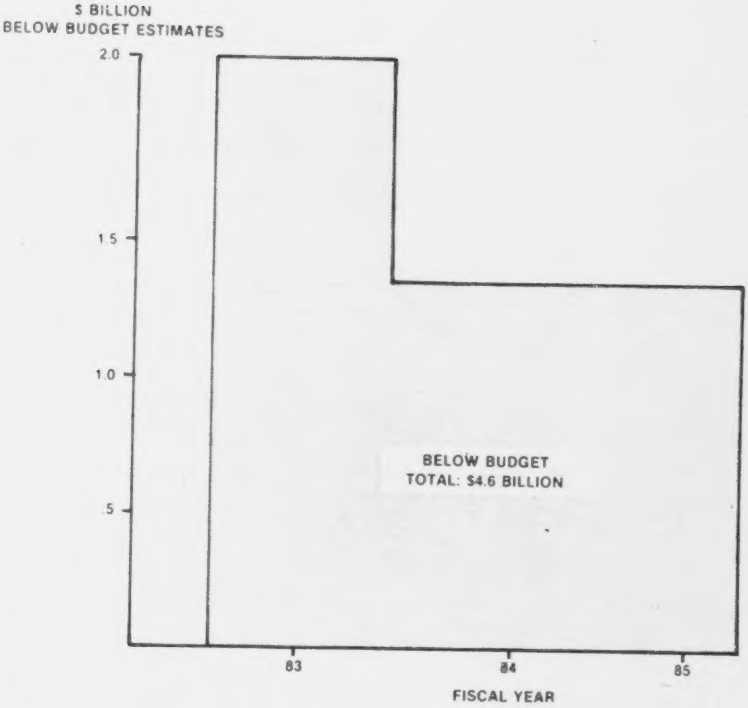


Figure 11

COST REDUCTION IN BUILDING 600-SHIP NAVY

FY 83-85 PROGRAMS



program, there is a risk that we could have insufficient funds to execute authorized programs.

Joint Procurement Initiatives

Initiatives designed to save money are also evident in the joint arena. Recognizing that weapon commonality is possible in many cases, we have developed a proven track record in joint procurement of ordnance. For example, the Navy and Air Force have coordinated development and procurement of a wide range of missiles including the TOMAHAWK, HARM, SPARROW, and SIDEWINDER. Economies of scale resulting from this cooperation have resulted in major cost savings.

The Joint Requirements and Management Board was created in 1984 within the Office of the Joint Chiefs of Staff. It consists of the Vice Chiefs of Services whose task is to increase and improve joint development of weapons systems. It had significant accomplishments in its first year of operation. In the area of remotely piloted vehicles and tactical cruise missiles, 17 service programs have been consolidated into seven joint programs which will save $4 billion in acquisition costs.

In similar fashion, the Joint Logistics Commanders (JLC) has streamlined operation as a forum for subjects of mutual interest and exchanging information among the Service acquisition communities. An example of JLC sponsored mutual support and joint efforts are savings which are expected in the tri-Service H-60 Helicopter program, totalling $111.5 million.

The recent creation of the Joint Assessment and Initative Office will ensure that this momentum is not lost. This office will evaluate initiatives, some identified by our Unified Commanders, which require joint programmatic support. Navy has joined the other Services in a Memorandum of Agreement on cross-Service participation in program development, enabling each Service to identify the other's key programs essential to joint combat operations.

I am pleased with today's spirit of inter-Service cooperation and would classify it as the Pentagon's leading growth industry. The Memoranda of Agreement that the Service Chiefs have signed address the hard issues of warfighting responsibilities. I am confident that we can continue to work together in the dynamic process of resource allocation.

Other Initiatives and Special Issues

Wargaming the Navy Program. Wargaming is an increasingly useful tool not only for evaluating strategy, but for providing insights into acquisition programs as well. Last year, for the second consecutive year, we tested our programmed force against the projected Soviet threat in a wargame at the Naval War College. The game produced a number of insights, this budget incorporates the results. We will continue to expand this effort.

Anti-Submarine Warfare. Of all Soviet Navy developments over this past decade, the improvements in their submarine force have been the most striking. Consequently, I directed a far-ranging reassessment of the ASW component of maritime strategy, and of the resulting research, development, and acquisition programs. As a result of this effort, we have a sound ASW strategy, and a range of R&D initiatives to support it. From these initiatives, we will develop the technologies necessary to ensure continued ASW superiority.

Space. Navy is the largest tactical user of space-based systems, using on a daily basis more than 85 percent of all satellite capacity provided to the Armed Services. There is growing recognition that space is a critical element of our combined arms approach to naval warfare. This past year, the Navy established a Space and Naval Warfare Systems Command to provide space systems development, acquisition, and integration focus. Within my own staff, I have broadened the charter of the Office of the Director, Command and Control and given him the responsibility for all space-related issues. Naval Space Command is fully operational and, as a component commander to the new

Unified Space Command, is working to make the most of unique capabilities space can provide the military. We are forming a Space Technology Center at the Naval Research Laboratory to harness the expertise resident in the naval laboratory system for maximum support of the naval space program.

Improved maintenance techniques. Navy is finding new ways to achieve cost-effective maintenance and repair programs. Because our preventive maintenance is improving, for all the positive support and personnel reasons I mentioned previously, our repair requirements are abating. We are also finding ways to save on major overhaul and repair contracts. A phased-maintenance program aboard several of our classes of ships ensures that primary engineering and combat systems will be maintained and modernized continually during the ship's life, thereby reducing the requirement for periodic major overhauls. The previous four to five year overhaul cycle has been lengthened to as much as 10 to 12 years for some ships, saving money and increasing readiness. Reliability centered maintenance procedures which focus repair efforts on equipment most in need of work have become the fleet maintenance strategy. Our drive to eliminate unnecessary work has led to an overhaul philosophy of "if it ain't broke, don't fix it." This zero-based approach to major equipment overhauls has saved time and money and actually improved material readiness.

Reducing Administrative Burdens. Management initiatives can save time, effort, and paperwork as well as money. Left unchecked, paperwork grows until it becomes a detriment to readiness. We have initiated an assault in this problem and already have reduced the demands for reports from our operational units by 50 percent. Over 600 reports have been cancelled, and I intend to see this number grow. Our directives place a moratorium on new reports and require that there will be no future growth in reports without corresponding reduction. There are no exceptions to this policy.

Fundamental to improved administration is the SNAP (Shipboard Non-tactical ADP Program) system to manage better logistics, maintenance, supply, and administrative functions aboard ship. We have this system in nearly 300 ships and will install 100 more systems in FY-87.

Staff reductions. There is a tendency for bureaucracies to grow if unchecked, and we were beginning to experience the adverse effects of redundant bureaucracies. Too many people were working the same problem, creating paper logjams and slowing the decisionmaking process. Our solution was to meet this problem head-on and abolish the Naval Material Command. We eliminated a total of 450 NAVMAT positions, plus another across-the-board 10 percent cut in all remaining Systems Command headquarters staffs, after conducting an extensive billet review to ensure that all necessary tasks could still be accomplished. Growing headquarters staffs and bureaucracies do not enhance combat readiness and Navy is proud to repeal the "iron law" of bureaucratic bloat.

Supply Management Improvements. We have initiated actions to identify and correct supply system procurement, physical security, and inventory management problems. Our introspective look at supply policy and procedures has reinforced numerous actions to improve fleet supply support. Over 252 management actions were ordered to correct the problems we found and over half have already been completed. These actions cover several areas including emphasis on personal accountability, regulatory integrity, improved inventory management of ADP systems, tightened physical security, and a code of ethics for material and financial managers. Remaining actions are being monitored closely and will support our goal of balancing high readiness with increased accountability.

Security. Navy has been shaken by revelations of espionage which spanned a number of years and involved a number of people. Damage done by thse espionage activities is still under review, but a preliminary assessment is that Navy and other defense elements have suffered severe compromises in some areas. The damage is, however, reversible. Many compromises of communications and submarine-related operations data were perishable (time-sensitive) information. We believe we are no longer vulnerable in these areas. The damage assessment regarding other systems and tactics is continuing.

We have initiated new controls and programs to repair the damage and to assure future espionage will be difficult to commit and easier to detect. Stricter controls for handling cryptographic material have been instituted. There has been a significant reduction in the number and level of security clearances. A program is underway to conduct screening polygraph examinations of a specified number of Navy personnel who have access to very sensitive information. We have expanded our counterintelligence briefing program and technical surveillance countermeasures equipment is being upgraded. Procedures for granting security clearances are also being upgraded and centralized. Finally, we have formalized a process to alter operational procedures at sea where necessary to reduce Soviet confidence that they can now predict our weapon system employment concepts because of the Walker case.

We need the support of the Congress to provide additional measures to guard against and deter future espionage activities. The offense of espionage, committed during time of war or in peacetime, irrespective of the motive, should be punishable by the death penalty. Amendment of the Uniform Code of Military Justice (UCMJ) to authorize the death penalty for those under military jurisdiction and convicted of espionage was a positive first step. But Title 18 must be amended to increase the range of sentences for conviction of espionage for those not prosecuted under the UCMJ. We should reduce the number of hostile intelligence collectors in the U.S. Legislation should be passed to control Soviet/Warsaw Pact and aligned diplomatic, consular and trade personnel in the U.S., both in number and in their ability to move about, especially in national security sensitive areas. Legislation should apply to nationals of those countries employed by the U. N. Secretariat.

While much needed authority for federal investigators to have access to state and local criminal records has been granted, in view of the motivation exhibited in recent cases, access to financial records is also required. A program is needed to reward those who provide information leading to the arrest and conviction of individuals involved in espionage, to seize the fruits of espionage crime and to prevent those convicted from profiting by publication about their crimes. Finally, consistent with the need for counterintelligence polygraph examinations of armed forces members and DOD civilians, use of such examinations for defense contractors should not be unduly constrained. Debriefings have shown that the polygraph potential is a primary deterrent against espionage.

Espionage activities have had a significant impact on our Navy, and we have felt an obligation to be in the forefront improved security policies, procedures, awareness, and technologies. We will continue to emphasize the professional element of accountability in naval leadership.

FOIA. Recent interpretation of the Freedom of Information Act raises potentially serious problems. Before 1985, DOD exempted under FOIA technical materials which, although set forth on paper "records," are actually commercially valuable property. Early in 1985, as a result of a court decision, Department of Justice (DOJ) determined that exemption of these items was improper. Navy is now responding to FOIA requests for 100,000 P-3 aircraft engineering drawings and 39,000 drawings for Pratt and Whitney engines, representing the beginning of a potential deluge of similar requests. We do not believe that Congress intended FOIA to release commercially valuable and competitively sensitive information and request that Congress clarify its intention.

SUSTAINING ACCOMPLISHMENTS: THE FY-87 NAVY BUDGET

As you have reviewed this report's graphs and statistics which show improvements, I hope you have also considered ramifications for national security had the downward trends of the 1970s been allowed to continue. Regaining our strength has been difficult and expensive. Now that we have largely recovered, we have an opportunity to sustain recent accomplishments at modest cost, and avoid the necessity for another expensive recovery program in the future which will otherwise be heaped upon our successors.

Navy's FY-87 budget requests a Total Obligational Authority (TOA) of $94.3 billion. We have been successful in increasing competition in procurement, decreasing unit costs, and learning to be more efficient in many areas. While these initiatives help reduce the magnitude of cost growth, they cannot eliminate it altogether. I recognize that we are at a time of hard decisions about the nation's budget deficit. But I ask that you look closely at requirements which derive from national and maritime strategy -- not only wartime requirements, but extensive peacetime operations in support of this nation's interests, and the resultant demands on the Navy to respond to crises an average of six times per year. I believe you will conclude that this nation needs the 600 ship, modern, and balanced fleet, with high levels of readiness and sustainability, manned by high quality people.

The Navy budget is sound because it is focused, disciplined, and shaped within a single frame of reference: the maritime strategy. In Navy program planning, maritime strategy provides the point of departure for a series of subsidiary strategies, master plans, and appraisals which identify and prioritize requirements. These appraisals involve analyses of strategy-derived warfighting requirements, looking at threat and requirements now and for the next several years. This process results in a thorough annual assessment of what Navy can and cannot do in support of strategy, where changes to programs are necessary, where new programs are required and which programs should be cut.

Navy's budget is not exclusively a Washington exercise, devoid of any connection with the operational Navy. The Fleet Commanders-In-Chief have an increasingly powerful and institutionalized role in the Navy budget, just as Unified Commanders have an increasingly important role in the Defense budget. For example, because the CINCs' unanimous top priority has been improving ordnance stocks, sustainability has been the fastest growing sector of our budget, having increased by 135 percent since 1980 -- almost three times the overall TOA growth rate. The budget balances the longer-term perspective of the Navy Headquarters staff with the CINCs' nearer-term focus and sense of urgency. This ensures a budget properly balanced among the four previously-discussed pillars of total military capability:

integrated logistics support readiness, sustainability, modernization, and force structure. Figure 12 shows the current balance.

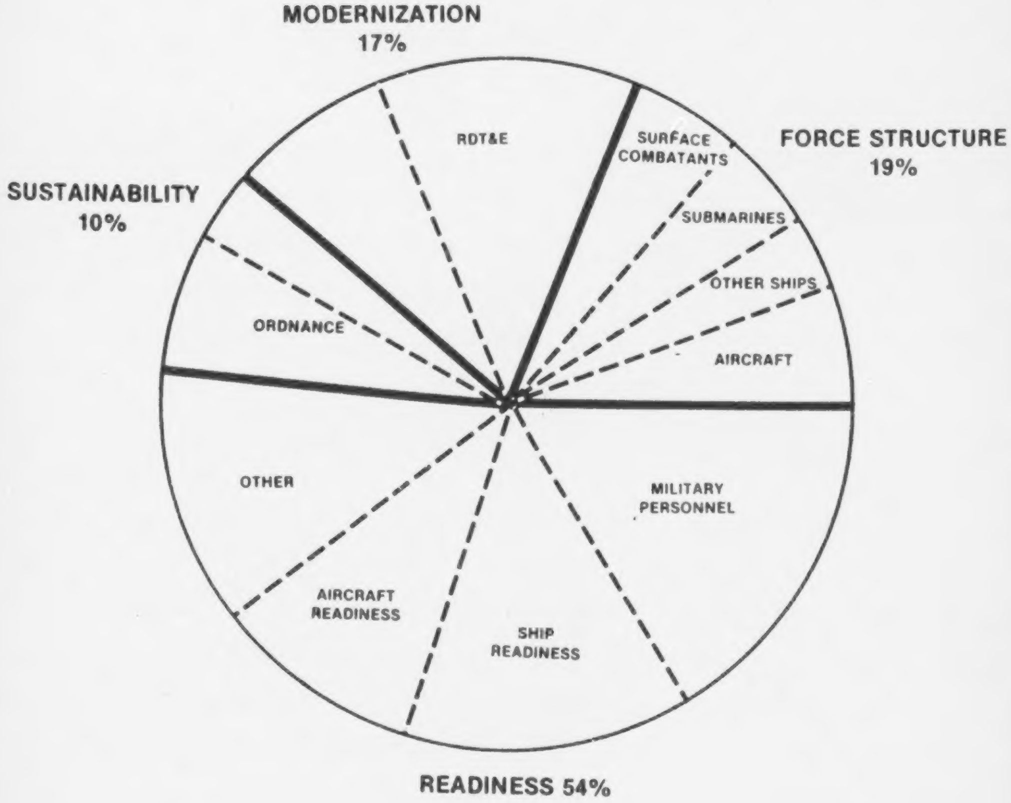
ILS Readiness

ILS readiness funding includes personnel, spare parts and other support items, fuel for ships and aircraft, training costs, and other items required to support the day-to-day ability of ships and squadrons to perform their designed tasks and missions. This pillar accounts for over half of Navy TOA, belying suggestions that this component of total capability has been sacrificed for force structure.

Approximately one-third of this request is for military personnel. This is the most critical part of our entire budget given the extraordinary impact of personnel readiness on total Navy operational readiness. This year, I am particularly concerned with adequate funding to recruit required numbers and quality of personnel, to retain critically needed personnel, and to provide modest end-strength growth for the growing fleet that the maritime strategy requires. In this fiscally constrained environment, the Navy budget reflects a firm belief that personnel programs remain our highest priority and the foundation of the Navy's continued success.

Figure 12

FY-87 NAVY BUDGET BY PILLAR



We have continued to meet recruiting goals by drawing down the Delayed Entry Pool. Recruiting trends are down and long-term indicators are disturbing. Since 1981, the primary population of young men from which we most heavily recruit has declined by 5.4 percent and will decline by another 17.9 percent before it bottoms out in 1996. Therefore, we must recruit a higher percentage of the population. But recent surveys show that this group's positive propensity to join the Navy is declining as shown in Figure 13. Many of the causes of this decline are not within our control, but at least two are: advertising programs and recruiting manpower. To continue to meet recruiting goals we must ensure adequate resources for these two key areas.

Retention in general has been excellent, but in critical areas, problems are emerging. Loss of mid-grade, experienced aviators is one of these. This shortage is now in excess of 1100 pilots, with resignations continuing at about 500 annually. This could continue through 1990 as airlines continue to expand and replace retiring pilots. Compounding the problem is a relatively healthy economy which affords other employment opportunities as well. Thus far we have been able to manage this shortage through carefully managed distribution policies, but not without adverse impact on personal and career needs of individual aviators.

Increased compensation, such as Aviation Officer Continuation Pay (AOCP), is a tool we can use to improve aviation retention.

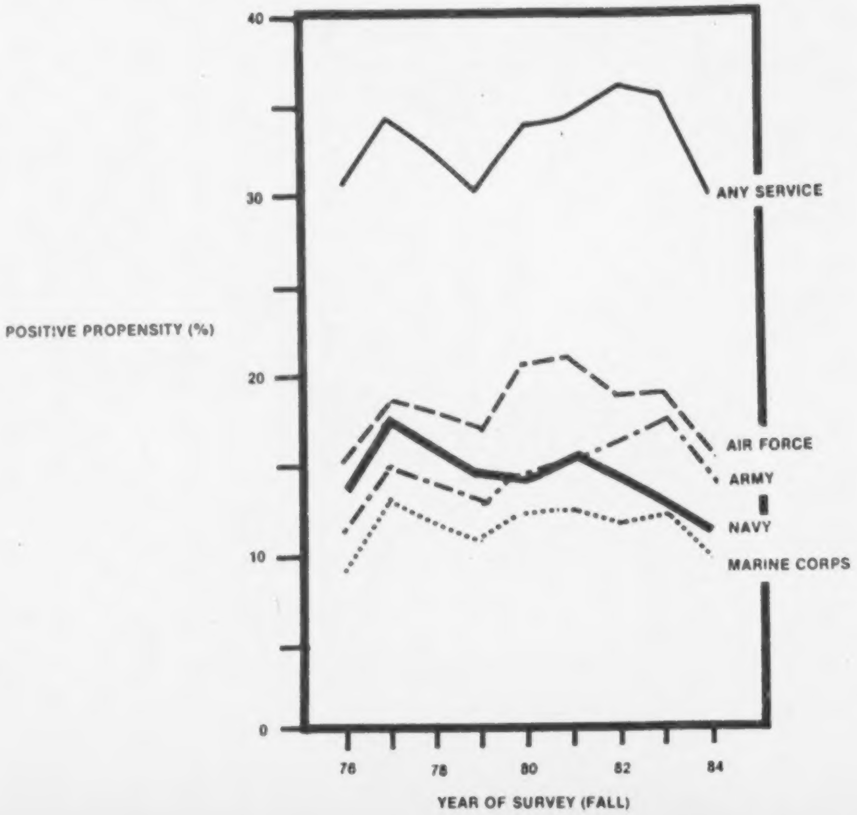
The AOCP acceptance rate, however, has steadily decreased. Value of AOCP has been eroded by inflation, concomitant Aviation Career Incentive Pay (ACIP) reduction, and Hazardous Duty Incentive Pay (HDIP) restrictions while under contract. Legislative changes and improvements to AOCP are required to restore its effectiveness. AOCP remains the critical compensation initiative the Navy needs to preclude a return to the high pilot losses of the late 70's.

We also have a shortage of experienced nuclear-qualified officers in grades of Lieutenant Commander through Captain. These officers are required for service at sea in nuclear powered ships and in shore billets directly supporting fleet readiness and nuclear propulsion plant safety. Enhancements to Nuclear Officer Incentive Pay (NOIP) contained in the FY-86 defense authorization will help reduce this shortage substantially over the next five years, but close monitoring is required. A continuation of authority to temporarily "spot" promote officers to Lieutenant Commander (LCDR) is requested as we are still forced to place high quality Lieutenants in LCDR engineering billets because of our shortages.

Unique demands of sea duty increase our Permanent Change of Station (PCS) requirements. It is simply not feasible to have

Figure 13

POSITIVE PROPENSITY TO SERVE ON ACTIVE DUTY FOR YOUNG MALES (16-21 YEARS OLD)



the number and diversity of shore duty billets in each homeport which would permit most sailors to rotate from sea to shore duty and back without PCS moves. Consequently, our ability to reduce PCS is limited by the need for equitable sea-shore rotation. Your support for funding to execute a balanced PCS program which will support reasonable sea tour lengths, provide reenlistment incentives, correct manning imbalances, and allow necessary training will go a long way toward improving quality of life and, as a result, Navy readiness.

Enlisted TAR personnel serve tours of sea duty side-by-side with USN counterparts on Reserve ships, yet they are not eligible for the same retention incentives. We have requested authority to pay a Selective Reenlistment Bonus (SRB) to a limited number of TAR personel in critical ratings to enable us to man the active duty portion of an expanding number of ships in the Naval Reserve Force (NRF). We are also requesting authority for a modest Unit Incentive Pay for Selected Reserve crew members of our Naval Reserve Force ships. Compensation initiatives such as these are critical to our ability to continue the growth of Reserve strength to programmed levels and to man the modern warships we are placing in the NRF.

We have an urgent need for a relatively small increase in manpower to support the growing fleet. You have funded the ships and aircraft for a 600-ship Navy by 1989. Personnel growth has not kept pace. The Navy's manning needs are unique because of necessary sea-shore rotation demands; on an aggregate basis in the force structure, every two billets added at sea require one billet added ashore to ensure equitable rotation and prevent unduly long sea tours. To maintain adequate manning of ships and aircraft squadrons in a growing fleet despite end strength limitations, we have inadequately manned fleet support and shore activities. This will affect readiness in the long term. It has already led to longer sea tours for critical, sea-intensive ratings. We continue to seek ways to cope with inadequate endstrength, such as civilianization of some shore billets for ratings which are not sea-intensive, but we have cut shore manning as much as it can be cut. If the trend established by FY-82 through FY-86 endstrength constraints continues, the Navy will be some 18,000 people below manning requirements in 1991. We are requesting an active manpower increase of 2.0 percent for FY-87.

Sustainability

Sustainability comprises funding for the Navy's staying power in conflict, principally ordnance and war reserve material. Because our strategy explicitly considers protracted conventional conflict, and because ordnance stocks for protracted conflict have consistently been at the top of Unified CINCs priority lists, Navy's sustainability account has more than doubled its share of the budget, from 4 percent in 1980 to 10 percent today. Real growth in sustainability since 1980 has been 135 percent, almost three times the overall TOA growth rate. Results are now being seen in the substantial numbers of weapons and sonobuoys, appropriated in previous years, now being delivered. Our current request continues this urgently needed recovery.

Modernization

Modernization comprises funding to improve the technological sophistication and capability of current forces and to ensure we develop technologies to meet future needs. It includes all Navy Research, Development, Test and Evaluation (RDT&E), ship modernization, aircraft, sensor and weapon system alterations, and represents some 17 percent of the Navy budget. Modernization has been second only to sustainability in the rate of real growth since 1980, growing by some 80 percent.

Emphasis on modernization reflects the growing capabilities of the threats we must face, both Soviet and non-Soviet. The Soviet Union has a decided numerical advantage in forces. U.S. policy has been to counter by technological superiority and qualitative edge. We are now seeing a strong commitment to qualitative improvement in newer Soviet forces. New Soviet ships, aircraft, and submarines are technologically sophisticated and highly capable, due in large measure to the hemorrhage of Western technology. Non-Soviet threats, such as Libya and North Korea, have also shown steady qualitative equipment improvements.

RDT&E accounts for well over half the modernization request. Our vigorous RDT&E covers a full spectrum ranging from basic research and exploratory development of new ideas, through developmental and engineering progams to testing and evaluation of systems ready for fleet introduction. Major programs include continued emphasis on modernizing our seabased strategic deterrent, particularly development of the TRIDENT II/D-5 submarine-launched ballistic missile, toward a 1989 initial operational capability; continued development and testing of the V-22 OSPREY (formerly JVX) vertical/short takeoff and landing aircraft, toward a planned first buy in FY-89; Aegis weapon system improvements for upgrades of TICONDEROGA class cruisers and for introduction of the DDG-51 ARLEIGH BURKE class guided missile destroyer, with the lead ship to be delivered in 1989; as well as a major upgrade for the A-6 INTRUDER medium attack aircraft.

Battle force ships and aircraft will receive upgraded command, control and communication (C^3) systems essential to integrate the fighting fleet and provide real-time coordination. Because of the complexity of C^3 and the necessity to avoid piecemeal solutions, we have consolidated resources and top-level engineering management of core battle force C^3 systems under the Battle Force Information Program.

A particularly critical program is the R&D effort supporting anti-submarine warfare (ASW), particularly the development of a new attack submarine, the SEAWOLF class (SSN-21). This submarine will represent a quantum improvement over our outstanding LOS ANGELES class. R&D programs now underway will provide the SSN-21 with improved quieting and new sensors, a more effective and integrated combat system, greater firepower, and improved arctic warfare capability. I am confident that the SSN-21 will again put us a decade ahead of comparable Soviet submarines.

Research in oceanography is of special interest to the Navy. Recognizing that we must better understand the oceans in order to exploit them for strategic and tactical advantage, the Secretary of the Navy and I implemented a number of initiatives. These initiatives range from expanding the Navy oceanographer officer community, to modernizing our oceanographic ships and acquiring remote (space-based) sensing capabilities, and reflect our commitment to keep the Navy a principal force in oceanography.

Force Structure

Force structure funding includes appropriations for construction, conversion, and reactivation of ships, and for procurement of aircraft. Numbers and capabilities of our ships and aircraft are the most visible and tangible indication of naval power and total capability. Force structure is the most visible budget component, although it accounts for only about 20 percent of TOA. This year's request represents the minimum necessary to sustain into the 1990's and beyond the balanced 600-ship force which we will achieve in 1989.

Funding for submarines, surface combatants, amphibious and other ships accounts for almost three-quarters of the force structure request. Table 2, the Navy Shipbuilding Plan, shows what that funding buys. We are requesting a 14th OHIO class ballistic missile submarine, and four more LOS ANGELES class submarines to meet our goal of 100 attack submarines. The request also includes five Aegis-equipped surface combatants, 2 TICONDEROGA class cruisers and three ARLEIGH BURKE class destroyers. We are requesting funds for the lead ship of the AOE-6 Fast Combat Support Ship class.

TABLE 2

NAVY FIVE-YEAR SHIP CONSTRUCTION/CONVERSION PLAN

	FY-87	FY-88	FY-89	FY-90	FY-91
New Construction					
TRIDENT	1	1	1	1	1
SSN-688	4	3	3	4	1
SSN-21	-	-	1	-	2
CG-47	2	2	2	2	-
DDG-51	3	3	3	3	5
LHD-1	-	1	1	-	1
LSD-41 (VARIANT)	-	1	1	1	1
MCM	-	3	-	-	-
MSH	4	4	4	-	-
TAO	2	2	2	2	2
TAGOS	3	3	2	2	-
AE	-	1	-	2	2
AOE-6	1	-	1	1	1
ARS	-	-	-	-	1
AGX/AGOR	1	-	-	2	3
LCAC	-	(9)	(9)	(9)	(9)
TOTAL	21	24	21	20	20
Conversions					
CV SLEP	-	1	-	-	1
LPD-4 SLEP	-	-	1	3	3
AO(JUMBO C)	1	1	1	2	-
TACS(C)	2	2	2	-	-
TOTAL	3	4	4	5	4

Table 3 is our aircraft procurement plan. In FY-87, we request a broad range of aircraft as we build toward an airwing structure needed for a balanced force.

THE COURSE AHEAD: MARITIME SECURITY REQUIREMENTS AND OPPORTUNITIES

The Navy's budget for FY-87 is the most concrete expression of my concerns about the present and near future, an honest appraisal of the direction I feel we must travel to sustain recent accomplishments, support national policy and strategy, and maintain a position of maritime superiority. But a budget or a five-year defense plan does not, in itself, provide a vision of the future to guide the Navy over the long term. As President Reagan has reminded us, "We are an island nation." We must maintain maritime strength into the distant future, in face of a menacing continental power fully bent on challenging our claim to the seas, and in face of a growing range of other threats in an era of violent peace.

To meet these requirements, today's decisions must be informed by long range thinking and sound strategic vision. The Navy has a particular requirement to look to the future because of the nature of our force structure. The ships we build today will be in commission well into the 21st century, in some cases 50 years hence. We must look now at maritime security requirements and opportunities that the next century might pose. We have begun such an effort, using maritime strategy as a benchmark.

The maritime strategy is not in itself a long-range plan. It is a comprehensive analysis of our capabilities, the threats we face and the environments in which we operate. It is the basis upon which the many and varied long-range plans within the Navy are developed. Using the precepts of the maritime strategy, the Director of Naval Warfare prepares master plans in each warfare area which look as far forward as possible. Based on warfare master plans and strategies, Navy organizations which sponsor procurement programs develop their master plans, laying out long-range force structure and modernization plans. Thus, our central strategic framework -- maritime strategy -- provides the point of departure and common frame of reference for decentralized, detailed long-range planning.

The results of this planning effort are not simply put on a shelf to gather dust. Plans and strategies are tested constantly in computer models, simulations, and wargames. Perhaps most importantly, they are tested against what we see in real life, at sea.

The Navy budget and FYDP which you see are only the tip of a planning "iceberg," which looks to the future to ensure that

TABLE 3

NAVY FIVE-YEAR AIRCRAFT PROCUREMENT PLAN

	FY-87	FY-88	FY-89	FY-90	FY-91
A-6E/F	11	12	18	24	24
EA-6B	12	12	12	12	12
AV-8B	42	42	42	42	42
F-14	15	12	18	24	36
F/A-18	120	132	132	163	163
CH-53E	14	14	14	12	0
V-22	0	0	18	42	58
SH-60B	17	6	6	6	12
SH-60F	7	18	18	18	12
P-3C	9	9	9	9	9
E-2C	6	6	6	6	6
SH-2F	6				
C-2	9				
T-44A	0	0	0	15	
T-45TS	0	12	24	24	48
UH-60A	0	0	3	3	
E-6A	3	3	3	3	
TOTAL	271	278	323	403	422

today's programs and decisions are solidly based. But, this process is not the full extent of our view of the future. From a broader perspective, we must understand those factors which will shape future maritime strategy, such as major changes in the global stratgegic environment, or in the resources available to us -- people, technology, the economy, demographics, social forces, as well as more specifically military factors. Several of these areas may offer unique opportunities or pose new requirements for U.S. maritime strategy of the next century, and I have initiated special efforts to broaden our understanding of these issues.

Global Environment. If we look back 30 years we see an international situation and principles of naval operations only incrementally different from today's world. However, if we extend our historic horizon back another 20 years, we witness radical discontinuities in the world's political make up and dramatic differences in the way navies operated. The future may well hold similar discontinuities and challenges. The U.S. Navy recognizes that it must lead changes in naval operations. We cannot afford the luxury of reacting to new realities.

The world environment injects a steady stream of new challenges -- oil crises, terrorism, drug abuse. We must understand the impact and interaction of those challenges as they relate to national security, the maritime strategy and the Navy.

We must be prepared to respond to them appropriately in support of U.S. national interests. We will continue to make every effort to define those forces which can shape the environment -- and thus our strategy -- of the 21st century.

People. U.S. demographic trends are disturbing in that the total manpower pool available for national service will shrink into the next century. Even more disquieting trends can be seen in the qualitative arena. While elementary and secondary schools are getting back to basics, the Navy has been required to lower the levels of training manuals, and institute remedial reading and other programs to develop skills which should have been learned in school. American youth is not as active or physically fit as in past generations, an issue of concern in time of war, where strength and stamina are vital to mission performance. Societal trends in the U.S. have encouraged youth to think as moral relativists, eschewing the time worn tenets of doing what is right for its own sake.

I believe that a rejuvenation of these three qualities -- intellectual, physical, ethical -- in America's youth is essential, and could overcome the quantitative shortfall the nation's armed services face in the next decade. I am also convinced that this message resonates with the vast majority of Americans, who in turn, are more likely to affiliate with institutions possessing the highest possible standards of personal excellence. For these reasons, the Navy is beginning long-term effort to enhance the general excellence of Navy men and women and to explore how we can support national efforts to increase the overall excellence of American youth. High-quality personnel are a crucial component of our national security. There is no more important challenge.

Sustainability in Extended Conflict. To meet an increasingly sophisticated threat, our weapons have become more sophisticated. This does not obviate the need for large volumes of weapons, sonobuoys, and other sustainability items in the event of a protracted conventional war. The possibility that a war could be protracted is a formidable deterrent to the Soviets who emphasize achieving a quick, decisive victory. Thus, a fundamental precept of the maritime strategy is to ensure that the Soviets face a protracted conflict should they choose to fight.

At present,the only way to ensure sustainability in extended conflict would be to stockpile huge quantities of ordnance. While stockpiling has its place, an affordable and credible military posture for extended conflict requires a radically improved system for ensuring that the industrial base can accommodate wartime requirements smoothly and produce the right kinds of weapons at the proper rate. This system must include cooperation and planning between the public and private sectors in determination of requirements and identification of potential wartime suppliers. It might include stockpiling of only the most sophisticated components in peacetime, using automated production techniques to quickly produce more easily made components closer to the time when needed and then marrying them for use in wartime. Such a system would not only put teeth into our deterrent but would also reduce our stockpiling requirements, thereby saving money in weapons appropriations.

Technology. The Soviet Union poses an increasingly effective threat to our technological superiority. Through open technology transfer, espionage and a dedicated and massive research and development effort, they have made great strides in closing the technology gap. There are even areas where they have established a margin of superiority, such as titanium hulls for submarines.

I am convinced that we can maintain and increase our lead in most important areas of high technology. The key to this effort is the close cooperation of the strategic planning and technology communities. For example, Navy laboratories understand the demands of the maritime strategy and projects assigned to them are directly related to those demands. Our entire national research effort must be provided similar direction and focus, such as that provided by research in strategic defense. Efforts must include the development of essential technologies and the timely transition into improved and more cost-effective systems.

Our efforts must be judicious as well as energetic. We must get a clear idea of our requirements, then strenuously avoid the urge to "gold plate." Technological self-discipline not only leads to more improved systems, but also maintains the public trust and consensus.

Naval Warfare Integration. Modern warfare requires integrated, cross-platform, cross-service thinking to adequately deal with increasing complexity and avoid piecemeal solutions. This recognition has already led to important organizational and programmatic changes. For example, we have strengthened the charter of the Director of Naval Warfare to establish integrated naval warfare requirements and operational concepts with emphasis on those areas which transcend individual naval platforms and include such areas as space and information systems. We consolidated responsibility for all electronic warfare programs into a single office under the Director of Naval Warfare, recognizing the impossibility of dealing with electronic warfare requirements on a platform-oriented basis. We recently reconfigured the Naval Electronic Systems Command to the Space and Naval Warfare Systems Command, recognizing the key roles of space-based systems and information architecture. As we move toward the 21st century, technological realities will make these trends even more pronounced. Artificial barriers to truly integrated warfighting have begun to come down, and we will accelerate the process.

Strategic Defense. The Reagan Administration has established a national priority to move from dependence on the destructive capabilities of offensive nuclear weapons toward research on defensive systems. I am optimistic that this research can produce technological breakthroughs which could move us into an era of enhanced security. Navy plays a major role in the conceptual development of strategic defense architecture since the strategic threat emanates from or transits over the world's oceans. We need to understand all the implications on naval warfare of the transition to a world where both superpowers have the capability to use advanced technologies to defend themselves.

These are key issues which will shape the maritime strategy of the future and challenge it to retain its dynamic qualities. I am confident that my tenure as the Chief of Naval Operations is merely one chapter in a maritime book of future strategic successes. Our people and ships are moving at flank speed into the future. Throughout this trip, strategy must remain the framework around which we plan for the future. It is the bedrock of the renaissance of the U.S. Navy today.

CONCLUSION

Throughout the report, I have asked that you measure us against our strategy. It should be apparent that our strategy is sound and dynamic; our accomplishments have been substantial and our requirements are well-founded; and today's decisions and budget requests are but the tip of a planning process that looks toward the future. Because of our progress over the past five years, and our initiatives to reduce costs and increase efficiency, only modest expenditures are required to sustain and keep us on the right course for the future. Working together with our allies and sister Services, the program we have proposed will maintain the maritime superiority, essential to our national security, both now and over the years to come.

The Navy's forward deployed role in protecting our interests will remain crucial in the unstable, often violent environment which confronts us. With your support and that of the American people, the Navy will continue to man the front lines of this violent peace, ready to face the challenges with confidence and spirit born of renewed capability.

Senator **Thurmond**. Thank you very much, Admiral.

Mr. Secretary, you have been quoted as agreeing that the 600-ship Navy will be unaffordable if Department of Defense does not receive consistent 3 percent real growth in the defense budget, and a great many people feel that the days of real growth are now waning.

We are at about minus 6 percent growth for fiscal year 1985, and declining. If you are faced with a choice of 600 ships that can only be sustained in combat for 30 days or a smaller fleet that can be sustained for 90 days, which would you choose?

Secretary **Lehman**. Well, that is a hypothetical choice. That is a difficult way to pose it. If the President does not get growth budgets to continue to maintain the full structure that he has today, then choices are going to have to be made as to the kind of capability he wants to keep.

We will have to re-look at the 600 ships, the 18 active Army divisions, the full Marine Corps capability, the 36 Air Force wings, and so forth. And, the President will have to decide which of these tools have to be maintained and in what capacity.

Obviously, it does not make sense to do things disproportionately. It does not make sense to have 90 days' worth of spare parts if you only have 8 days' worth of airplanes. It does not make any sense to have 90 days of ammunition if, in fact, you do not have sufficient Naval forces to fire that ammunition or to meet the minimum treaty obligations we now have.

So, that unhappy chore of finding out what kinds of military forces have to be extracted from the minimally adequate force structure we have in all of the services today, is not for me but a choice for the President. I would not want to speculate on whether he would want to take it out of airplanes, ships, extra months of spare parts, or elsewhere.

There is no absolute, and all of those things are part of readiness and not just spare parts and ammunition, which often get treated as readiness with everything else considered as force structure. There is no real distinction.

CROSS-DECKING AMMUNITION AND SPARE PARTS

Senator **Thurmond**. Mr. Secretary, we have received testimony from the Atlantic Command that the Navy has to cross-deck ammunition and spare parts before ships can be put to sea. They have further stated that this practice will continue into the next decade.

Is this a problem throughout the Navy, or just within the Atlantic Command?

Secretary **Lehman**. We found a situation 5 years ago that was scandalous. In 1981, for instance, he had to cross-deck every precious Harpoon we had. When one ship came out of the Med it had to stop in Rota and transfer all of its Harpoons to the incoming ship. They had to transfer their starters and huffers and what we call "yellow gear" on the carrier, because we had only six ships' sets of yellow gear to cover 12 carriers, and even those six sets were not complete.

We could not go to war with all 12. In fact, the budgets had been cut so drastically that we could only really have gone to war with about 4 of the 12, with their full load-out of ammunition and spare parts.

Today, that situation is completely changed. We will have full sets of yellow gear for 15 deployable carriers by 1989. We have nearly enough to cover all of the decks as it is. We have ammunition at 100 percent of stocks in every ship that deploys. We have triple figures of HARM missiles in the battle groups, and indeed, in every battle group that has deployed this year, and all that will follow.

Ships are filled to the gunwales with every major kind of the latest high-technology—the kinds of weapons that proved to be such a success in the Gulf of Sidra and in the operations in the last 2 days. We have full stocks of AIM-9M Sidewinders, full stocks of AIM-7M Sparrows, HARM's, Skippers, LGB's, CHAFF, and jamming pods. All of those bins are filled to the brim.

There are some unique kinds of individual gear, for instance, certain of the jamming pods which are newly developed, that we will have to cross-deck when the ships out-chop the Med at Rota. But, no longer do they have to cross-deck ammunition the way we did 5 years ago.

BALLISTIC MISSILE SUBMARINES

Senator **THURMOND**. Mr. Secretary, in the past the Navy has opposed keeping ballistic missile submarines in the fleet beyond scheduled deactivation. In spite of Soviet violations of SALT-II, two more missile subs are scheduled to leave service while the Soviets continue to violate SALT-II.

What is the Navy's position on maintaining the submarines in service now?

Secretary **LEHMAN**. The Navy's position is that we are prepared to carry out whatever decision is made by the President. We have made plans to go in any direction. We have prepositioned equipment and so forth to carry out the dismantling of those submarines on schedule.

We are also prepared to lay them up if that is the decision or to overhaul and deploy them if that is the decision.

Our budget reflects the fact that given the lower budget levels we have and absent SALT, we are recommending a reduced status at some level, not a full operational capability for these ships. But anywhere between full deployment and dismantlement, we are prepared to go.

Senator **THURMOND**. Now, we are going to allow 10 minutes to each Senator to propound any questions.

Senator Stennis.

Senator **STENNIS**. Let me pass for the time being, if you will, Mr. Chairman.

Senator **THURMOND**. Senator Warner.

Senator **WARNER**. Mr. Secretary, first I would like to compliment you on the completion of another year in office. You are setting one of the all-time records for tenure in that position, and I think that you can duly—although it is not your style of modesty, accept some of the praise for the operation of the Navy which is highly dependent on your leadership and the decisions you make in terms of its readiness.

PERSONNEL

Let us turn to the trends of personnel. If we look in the out years at the 600-ship Navy, we are beginning to see signs that because of the demographics in this country, that you could well experience a very difficult period in which to acquire not only the numbers but the quality of persons needed to operate a high-technology Navy.

Would you comment on what your plans are now?

Secretary LEHMAN. Yes, Senator. We look to the future with confidence, despite the dire predictions that have been made by some, every year for the past 5 years, that a growing economy will make it impossible to maintain the quality we need; that the declining demographics of the 18-year-old population will make it impossible and so forth.

We have seen no correlation between that steady decline in the size of the population we draw upon and our recruiting success nor have we seen any correlation with the increased economic activity that has now been underway for some 3 years.

We only draw between 100,000 and 150,000 a year, maximum, for both the Navy and the Marine Corps. There is no question that all of the armed services together have an adequately sized pool for long into the future to draw quality people from if we provide them the quality challenge and the quality career prospects that that type of people require.

Our population of 240 million is quite adequate to support an Armed Forces of the size that is projected into the future, so that does not worry me. I have become like a reformed drunk in my commitment to the All-Volunteer Force. I started this job as a total skeptic and now I'm a true believer.

I see a quality out there in the corps and in the Navy that is at a level, that in my personal experience of 20 years in the Reserves, seeing the fleet, has never been touched. I see by the statistics in the Navy Department, that even during the best periods, draft or no draft, we have never equaled the quality.

We have to continue to pay for that quality. Good people don't come cheap. We have to keep compensation up.

GI BILL

Senator WARNER. Well, that leads me to a second question which I will ask both Chiefs to address, following your reply. What are your recommendations to the Secretary of Defense with respect to the GI bill. My understanding is, the administration proposed that the GI bill be repealed. I would like to invite the Chiefs to comment on their views with respect to any personnel issues, and the GI bill in particular.

Secretary LEHMAN. Well, the decision made in the final endgame of the budget was such that the service Secretaries—I can only speak for myself—to delete the GI bill was taken so rapidly, or perhaps I was out of town, that I did not have a recommendation at the time.

I believe that whatever decision is taken to make putting time into the military more attractive is good including for those who are college-bound or vocational school-, technical school-bound.

Whether it is VEAP, ultra-VEAP or the GI bill, we have been very impressed with the success that the Army has had in advertising the benefits of the GI bill.

Senator WARNER. So, let me make it clear, you did not participate in the decision that the Secretary of Defense has made?

Secretary LEHMAN. No, sir.

Senator WARNER. Then, what is your recommendation to the Congress as a spokesman for the Department of the Navy?

Secretary LEHMAN. Well, I am a Presidential appointee and I recommend that you pass the President's budget as is.

Senator WARNER. Having said that, let us go to the GI bill.

Secretary LEHMAN. Having said that, I believe that the benefits that the Army has achieved, by their taking what Congress has given them and advertising it very imaginatively and effectively, has been one of the most successful personnel initiatives I have seen in my time in the Pentagon.

We are now shamelessly copying the Army in their approach to what they call the Army college plan. We have established a program called the Navy Sea College Program to target on vo-tech and college-bound kids, saying to them, "Hey, take 2 years off and come with us. Go to sea and see the world, and you will get the benefits that will make it possible for you to have more flexibility in choosing your college. Of course, you have to affiliate with the Reserves and drill for 6 years after your 2 years of active duty."

We found that the Army has had enormous success in tapping into the very high quality high school graduates, the upper middle category group of people. We believe the Army was very prescient and effective in taking advantage of the GI bill. It is not the only way that you can make an attractive package, but it is the one that exists. So that is the one that we have packaged up in the Sea College Program.

Senator WARNER. Now, Mr. Secretary, I would like to hear from the two Chiefs on the balance of my time, and I want the Commandant to give his views first on the long-range acquisition of the number of persons needed to man the corps, and secondly, on the GI bill issue.

General KELLEY. Last year, Senator Warner, we started to hear some of those projections on demographics, and there were many in this town that were forecasting gloom and doom. I took a little different approach. If I went out and told one of our 2,400 very fine Marine recruiters that he was going to have a problem because of demographics, he would consider that an order from the Commandant, and he would have a problem because of demographics. Instead, we went out and told them to recruit the quality people they had been recruiting, and they did exactly that. I would like to suggest that I am far less concerned with demographics and its influence on having a quality force in the future, than I am with such things as the erosion of pay comparability, the changes to our retirement programs, and insufficient family housing for our young married people.

The social fabric of our corps and indeed, I think, the Nation's military has changed since I last appeared for our posture hearings. The Marine Corps has made a crossover. We now have more dependents, 205,000 than Marines, 198,800.

I am concerned with an erosion of benefits at this particular time for recruiting, Senator Warner. The GI bill is not a requirement for the Marine Corps; but, from a personal perspective, I am the product of the era where the GI bill changed the entire social structure of the United States of America, the post-World War II era. As an example, when I was a young freshmen in college, I was one of the 5 percent to enter college directly from high school. The other 95 percent were those who had served their country so well during World War II and who would never, under normal circumstances, have had an opportunity to go to college without the GI bill. These are the people who today are distinguished Members of the Congress and who are doing well in business and industry. Therefore, I am a great proponent of the concept of giving those who serve their country an opportunity for educational benefits after they leave active service.

Admiral **Busey**. Senator, other than agreeing with everything General Kelley has said, I can only add that we too in the Navy are not concerned so much with demographics as we are with projecting, to that eligible group of young men and young women that we must recruit from in the years ahead, a positive image of the Navy.

We are working to sell the Navy, to encourage young men and women in the civilian community, to let them know what we have to offer, that it is a quality job experience, a quality learning experience. We are undertaking a new initiative that Admiral Watkins has embarked on to enhance personal excellence in the civilian communities.

We are working with a lot of schools across the country We have sailors working on weekends and assisting and instructing young men and women in the grade schools and junior high schools and high schools. They are out showing themselves in a positive way concerning their job satisfaction to the young men and women whom we must encourage to come into the naval service in the future.

Senator **Warner**. Thank you, Admiral. My time is up. Thank you very much.

Thank you, Mr. Chairman.

Senator **Thurmond**. Yes, sir.

The distinguished Senator from New Mexico, Mr. Bingaman.

Senator **Bingaman**. Thank you, Mr. Chairman.

Mr. Secretary, let me ask about a very interesting chart on page 22 of your testimony. The chart reminds me of the comparison that President Reagan made about the size of the deficit that Jimmy Carter left him.

You have got 2½ times as many feet of regulations, et cetera, as we have the size of the Washington Monument. What are these interpretation references you have? That seems to be the biggest single item. What is that?

Is that a problem we have caused?

Secretary **Lehman**. It is a combination of administrative law developed by applying all of the many small individual items that cover defense procurement, and interpreted by committees like the Defense Acquisition Regulation Council, the Federal Acquisition bureaucracy and other administrative kinds of quasi-legal groups like the Board of Contract Appeals. It is kind of a separate administrative body of case law.

Senator BINGAMAN. Is the point you are trying to make is that Congress and executive agencies that impose requirements on the Department of the Navy, have laid on you these very substantial additional requirements.

Are there any of those that you have any ability to affect?

Secretary LEHMAN. Well, first, the point is that we have a constant accumulation of this legislation and case law. I have urged for some time that we take a sunsetting approach or apply some kind of reform act the way parliamentary systems do for example, every 7 years have a law reform act to clean up all of that accumulation to boil it down and update it.

That doesn't take place now in the administrative and legislative accumulation we have here. Do we have an ability to affect it? Let me give you an example.

Two years ago our acquisition people recommended that we disallow the use of corporate jets as overhead except up to the level of first-class air travel where there was a direct commercial line. To disallow it is against Defense acquisition regulations. So we submitted our recommendation to the DAR Council. It has to go from the DAR Council through Federal acquisition procedures, be advertised in the Federal Register for comment, and so forth.

Two years later, it is still under bureaucratic review. So, yes, we do have an input, but that input to the extent we try to change anything, creates its own bureaucratic layer of activity. My own personal view is that the system we have today is in gridlock.

If you really try to follow the specifics of every single one of the legislative and administrative parameters that are given to us on acquisition, you could not operate. The way we do operate is by a much more pragmatic approach.

I think this needs to be reformed and cleaned up. And, the source of it, the single largest source is the indiscipline in Congress with the proliferation of subcommittees with no jurisdiction writing legislation. I mean, virtually every major committee has subcommittees now writing legislation that affects defense acquisition. If we can find a way to funnel things through the committees with oversight as the Intelligence Committee has done. Anything dealing with intelligence has to be referred to the Intelligence Committee for at least their input.

If we could achieve the same thing with the authorization and appropriations committees, that would be a huge step forward.

HOMEPORTING

Senator BINGAMAN. Let me ask about the homeporting issue, which I think is one of your top priorities this year in your budget. I have heard the arguments made that this dispersal of ships is key to the strategy and to the pursuit of our military goals. If that is true, isn't there some need for you to also pursue dispersal of ballistic missile and attack submarines?

Secretary LEHMAN. Well, of course, ballistic missile and attack submarines are dispersed in a somewhat different way because they are inherently different than surface ships. There are fewer of them, considerably fewer, than surface ships, and they do not have quite the same vulnerability to cruise missile attacks, and to sabotage as the surface ships do.

They do have the same, and indeed in some ways greater because of vulnerability to mining, they have deeper drafts. So, we do worry at places like Bangor and King's Bay, of the funneling and the ease of mining narrow channel and so forth there.

Since we have so few Tridents, the ideal dispersal would be what President Adams said in his famous recommendation to the Senate, that we should disperse all of our Navy from New Orleans to Passamaguoddy. But, Tridents won't fit in Passamaguoddy, and the expense of having the missile support facilities, the trainers and so forth, for a small number of ships, less than 20, does not make it feasible even though militarily it is desirable to disperse them more than we have.

We have dispersed them, as you know, on the east coast, in effect to three home ports: on the west coast to two home ports. We would like to have more but the expense of the missile handling equipment and the things associated with nuclear vessels, make it unfeasible to disperse further.

Senator BINGAMAN. So, basically it is a cost consideration; you cannot afford to do it?

Secretary LEHMAN. That is right.

GOLD-PLATING CONTROL

Senator BINGAMAN. You talk here about gold-plating control on page 25 of your testimony, and have fairly modest statement in here that gold plating is now under firm control. I would like to give you a chance to elaborate on that a little bit.

Secretary LEHMAN. I appreciate that chance, becaue I think it has been the key to all the other reforms we have made in the Department of the Navy, because you cannot go to competition on a fixed-price basis unless the requirements of the customer are brought under firm control first.

What drove the constant escalation of aircraft costs and of ship costs in the 1950's, 1960's and 1970's was the practice of issuing engineering change proposals, ECP's. That really got out of control. In other words, if a study was done that said, well, perhaps the F-18 ought to have a quicker roll rate, then an ECP was written just based upon that requirement to increase the roll rate. That was given as an order to the contractor, to modify the plane to make a faster roll rate.

And, nobody thought about the cost. We got to the point in the F-14, for instance, that until 1982 almost no two F-14's were the same ECP's came into the production line at such a constant rate that there was not a squadron in the Navy at that time that had all of its F-14's with exactly the same configuration. And of course that drove the cost up because the only way you can deal with that constant requirements creep is in a cost-plus kind of environment.

That helped to drive all of our contracting to cost-plus kinds of bases. What we did was to start from a zero base and say, "Now here is the baseline program, we will approve that, and that is what the project manager gets his budget for. That is what we present to Congress—this is how much we want for an Aegis cruiser or an F-18.

If there are any changes that are recommended, first of all we say, there will not be midproduction changes. Changes such as engineering changes, improvements, new commodities like JTIDS or jammers or whatever, will be made only at the annual negotiation of the new production contract. We call these changes block upgrades. Now, every 1982 model F-18 is exactly the same as every other 1982 model, but slightly different from the 1983 model. Ships are exactly the same.

During the year, these things are submitted as recommendations. If it has any price impact at all, it must be submitted as what we call a PMP, program management proposal to the Commandant, if it is a Marine program, or to the CNO if it is a Navy program and then to me. It has to be approved with the personal, nondelegatable signatures of the Commandant or the CNO and myself.

As a result, we now average less than 5 percent of the number of changes, change orders, per year and also as a result, we now have all of our aircraft on firm fixed price contracts. We have never had a cost overrun, not one, since we have put our aircraft on that basis.

There has been some grousing and complaining from the requirements writers that they did not get all the gadgets they wanted. We have disapproved much more than we have approved. But now, the system is self-disciplining.

The project managers do not want to stand in front of me and the Commandant on a Marine program unless they have got a very compelling case for the cost effectiveness of changing that design. We make them negotiate the cost and it has to be done on a fixed price basis before we approve the change. None of this, "OK; go ahead and change that and we will see what it costs."

It is similar to the Air Force baselining concept with one big difference. The baselining concept, in effect, gives the project manager authority to make those changes, but he must report them upward. In the Navy system, he cannot do it on his own unless he gets the signature of the Secretary of the Navy and the Commandant or CNO.

And so, it really works. It has enabled us to shift to dual sourcing and to fixed pricing on all of our ships and firm fixed pricing all of our aircraft.

Senator BINGAMAN. My time is up. Thank you, Mr. Chairman.

Senator THURMOND. The distinguished Senator from Maine, Mr. Cohen.

Senator COHEN. Thank you, Mr. Chairman.

SUBMARINES

Mr. Secretary, if I could inquire about the submarine share of the Navy budget. Historically, submarines have occupied approximately 20 percent of the FC account, and in conjunction with the SSN-21, the Navy justification for at least going forward is that it will consume still no more than 20 percent. That is predicated upon about a 4-percent real growth increase in the defense budget, which most people apparently feel is unrealistic in today's environment.

The Congressional Budget Office has gone further, indicating that if there is no real growth in the defense budget, the SSN-21 could consume as much as 30 percent. If there is negative growth of 3 percent, a negative growth which is not beyond the pale of possibility, I suppose, that we are talking about a potential 40 percent of the FC on account.

Now, under the circumstances, is it justifiable to go forward with the SSN-21 when, in fact, the current threat can be—and the perceptible emerging threat seems to be—that terrorist types of activities in which the surface ships play a much larger role than the submarine force are going to be required? And do not ask me to repeat the question.

Senator THURMOND. Mr. Secretary, just before you answer that, as President pro tem, I have got to go over and open the Senate, and I am going to request the able Senator from Maine to act as chairman.

Senator STENNIS. Mr. Chairman, may I say this, I passed when you came to me before. I find myself in an additional bind now, and if I could be called on soon rather than go all the way around, it would help me greatly.

Senator THURMOND. All right. Could we take you next?

Senator STENNIS. I do not want to impose on anyone else.

Senator COHEN. Would you like me to yield now?

Senator STENNIS. No, not right now.

Secretary LEHMAN. Senator, your question is a very pertinent one, and if we face lowering budgets where we cannot fit all of our current program in, I would say, that in subsequent years, the numbers of submarines that we build will have to be where the modulation comes rather than not proceeding with the SSN-21.

I think that the SSN-21 design is overdue. To me, the highest shipbuilding priority right now, is to get that lead ship built because it will produce a quantum order of magnitude change in operational speed and quietness, and that is essential. The numbers of them, how many we can afford, is a different question and I would say the recommendation of a tradeoff would be too slow down the Trident strategic program rather than the SSN-21 and to maintain older SSBN's in the force longer, rather than chopping them up, as the prudent way to husband resources.

But, I would rather see fewer numbers of ships in the shipbuilding program than see SSN-21 shut down or slowed down or deferred. We need that program.

Senator COHEN. The numbers I was looking at, we had an inventory objective of about 100 SSN's. We have got 96, and on the battle group ships we have an inventory objective of about 100, and we are about 69 now so there is a considerable shortfall on the surface ships.

And again in terms of the emerging types of threat, Third World nations, it would seem to me these ships are going to play a more important role.

Secretary LEHMAN. I would certainly not recommend it. I would say the second priority—and I do not want to be held to prioritization in the program—but certainly getting Aegis into the fleet in the DDG-51 and the CG-47 program runs right up there as among the highest priorities. We do not want to see that program slowed down, and I would certainly, if I ever had to, recommend cuts elsewhere rather than slowing Aegis. As we have seen in the Gulf of Sidra and as we have seen for the past 2 years of Aegis deployments, this is a genuine revolution in the military balance.

It has transformed the entire military balance at sea from one where we did not believe we could fully handle the cruise missile and attack aircraft threat, to a full confidence that we now can—that the pendulum has swung clearly to the defense side. We can now handle, with confidence, even massed stream raids by the best the Soviets have.

So, we need to have two Aegis systems in each full battle group, and we are not going to slow down that priority.

Senator **Cohen**. Would you recommend a priority, then, of say, cutting the 688 in order to reserve four or five Aegis systems?

Secretary **Lehman**. I would urge tradeoffs—without helping you target any single program, I would urge no cuts be taken at all in the five Aegis ships that we have in the program. Those ships can do more to increase the survivability and the deterrence of our surface fleet than any other program.

TERRORIST THREATS

Senator **Cohen**. General Kelley, if I could just turn to you about, again, the increasing terrorist threat that we face, and the role of the Marine Corps. The Marine Corps is charged, among other things, with protecting naval assets, bases, vessels, and so forth, and the National Security Act of 1947 established the security force, and apparently it was agreed upon to set a limit to 6,500.

It is my understanding of the security force, that security force even though it may be in the Pacific and the Atlantic, is under the jurisdiction of you and the CNO, and the CINC's have sort of mildly complained about that. Do you think that operationally, that the CINC's ought to have control of those? Since they are responsible for the protection of naval assets, should they have the control of the security forces?

General **Kelley**. Well, in point of fact, Senator Cohen, on those installations that come under the operational control of the CINC's, they are in the direct line and the chain of command that goes to the CINC. But back to your original thought, the Secretary has directed, with my full concurrence, that we within the Department of the Navy take a whole new, fresh look at how we will provide security to all of the Department of the Navy installations. We are now working on that problem to see if indeed there is any validity.

The 6,500 figure was based on just adding up validated posts and stations, in those areas where we have marine barracks. We are taking a whole new look at the concept now. So I would suggest that the 6,500 number is no longer a valid point of reference until such time as we really take a look and find out what we do need.

Senator **Cohen**. The CINC's have pointed out that the security forces perform substantially more services than just security. They have to perform support services as well, and they argue that they ought to lift that ceiling up proportionately.

General **Kelley**. Well, I would suggest that we do not get mesmerized by the ceiling, because the Secretary's verbal guidance to all of us is that this will not be just Marines. We will be conducting these kinds of security tasks; but also, there is no reason in the world why we cannot have sailors, who are properly trained and equipped doing security tasks. We have had that at many times in the past, and it has proven very, very successful.

Secretary **Lehman**. Senator, if I might, we are in the midst, as the commandant has said, of putting together an entirely new concept for security with the Marine Corps given the primary responsibility to provide the professionalism and expertise throughout the Department of the Navy. We want to spread load more evenly the requirement for personnel. Sailors need to now begin to bear a larger load of the security forces.

But, probably in most of the installations under Marine cognizance, we are going to do away with the concept of the Marine barracks as a kind of a police force and instead look to the Marine Corps for the expertise and the antiterrorist skills needed to provide cadres around which to build a much larger security force without increasing in strength.

Rather than coming to you and asking for a larger end strength for the Marine Corps and a larger end strength for the Navy, we want to go to a concept of using temporary assignments of people, to provide the increases adequately trained for tasks they will be given in gate guard and security patrols.

Senator **Cohen**. Is this the so-called mobile reaction force?

Secretary **Lehman**. No, this is different. It is an internal Department of the Navy, reordering of assets, for better integrating the Marine and Navy training to meet this greatly increased terrorist threat.

Senator **Cohen**. Are you also looking at the pilot project that was instituted at Mare Island?

Secretary **Lehman**. Yes, indeed.

Senator **Cohen**. That is the concept I am talking about, so that is on a dual track?

Secretary **Lehman**. That is right.

PURSUIT OF OIL

Senator **Cohen**. There was an interesting piece, that was published by a gentleman named David Hendrickson, called "The West and the Pursuit of Oil." Are you familiar with that article?

Secretary **Lehman**. No.

Senator **Cohen**. Well, he argues that the revolution of the world oil market that occurred in the early 1980's has not brought a corresponding transforming of our military posture and our strategic outlook, basically pointing out that we have become less dependent upon Persian Gulf oil, by way of example; that we receive 7 times as much oil from our own hemisphere as we do from the Persian Gulf; and that we get 12 times as much oil from Mexico as we do the Persian Gulf. And yet, we still have the extensive commitment to defending that region of the world.

And ultimately he makes a number of points, but two that struck me was that, No. 1, we should take measures to ensure the United States' oil independence, to lessen our oil dependence. But No. 2, to make clear to our oil allies that there are some limits to which we will not go in defending their increasing dependence upon oil, if they are going to become addicted to the short-term run of low oil prices coming out of the Persian Gulf and thereby making themselves that much more under their influence and domination.

Then, there has to be some signal sent to them that there are some limits to which we will not expend considerable billions of dollars to defend those interests. And I raise this in conjunction with the type of response that we saw from our allies. Italy—I do not put France in that same category, but certainly Italy and Germany, still heavily dependent upon Libyan oil and Persian Gulf oil, in addition.

And so, should our maritime strategy be altered or at least more well designed and crafted so that they understand there are some limits other than us just pulling out the billions to the point where we are acting unilaterally in defense of their interests?

Secretary **Lehman**. Well, Senator, as you recall from my speech at Wehrkunde 3 years ago where I made this very point, and the interview that I had in the Economist 2 years ago, the Navy has been warning for a long time that there have been huge shifts underway in our vital interests just these past 3 to 5 years. For instance just in the period I have been in this job, we have seen the trade balance which used to be even between our Pacific trading partners and our Atlantic trading partners, now shift in the Pacific, to 140 percent, of what it is in the Atlantic.

At the same time, I have been using those very figures in my testimony each of the last 3 years, and I have been tracking the shift and saying that our maritime strategy is premised on that fundamental shift in long-term oil dependency and in commercial dependencies. One of the direct results, which you have heard me speak to quite frequently, is that the old swing strategy, that said we could afford to swing the Pacific Fleet to support the Persian Gulf and the NATO theaters, is nonsense today.

It is unthinkable because of the shift in where our vital interests lie that has taken place. That is the single and most simple answer as to why we must now have the expansion from the Carter-sized Navy of 479 ships to the current 600-ship Navy. We can no longer swing the shift in the balance in the Pacific.

Now, as you rightly point out, we get more than double the amount of oil coming through the Gulf of Alaska by sea than we get from the entire Middle East. That is why we have pushed so hard for a home port up in the Northwest. Now, we are 1,700 miles away from where we could be for the normal protection of those vital oil sea lanes.

That is far more important in volume of oil to the U.S. economy in volume of oil than the entire Middle East is today. Our strategy has reflected that for some considerable time. And I think that is one of the reasons why there has been a lack of immediate understanding of why strategic home porting is so important. Not everybody has tracked, as you have, this shifting in strategic realities.

The Soviets have, and that is why they have permanently shifted their new Kirov nuclear cruiser permanently to the Pacific Fleet; why they have shifted two of their carriers; why they now have 130 subs; because they see the growing vulnerability of the United States economy relative to where it used to be, shifting much more into the Pacific.

And, our allies also have to take cognizance of the fact that it is their vital interests that are involved in the Persian Gulf, in terms of their economy far more than ours.

Particularly, Japan, which is some 70 percent dependent on Persian Gulf oil, and while the United States is below 2 percent for its imports. And I shall certainly read that article right away because it will reinforce all of my existing prejudices on that fundamental shift.

Senator COHEN. Thank you, Mr. Secretary.

Senator Stennis.

Senator STENNIS. Mr. Chairman, thank you very much for letting me proceed out of order after I had passed.

HOMEPORTING

Members of the committee, we had a hearing, the subcommittee had a hearing last week on this question of homeporting, where the Navy made a presentation there by witnesses that are on duty now, and in uniform now, and they were not longwinded but they made one of the most conclusive and interesting presentations I have ever heard as a member of this committee, regarding a major factor in connection with the operation of the Navy, in this case the operation of their forces, and I was very much impressed with it.

For instance, I had not had a chance to really learn what this homeporting meant. It is much broader and more impressive and closer to the battle lines than I had realized. I thought it was more or less just homeporting for the families, but startling facts like this, which shows that more oil comes to the United States today through the Gulf of Alaska than from all of the Middle East.

More troops and reinforcements would be sent to Europe in emergencies, if we should have one today, from the gulf coast ports than from all the rest of the country. Now, if I understand it correctly, that is an amazing fact of life. I never dreamed that this thing, this subject matter, was of such sweeping importance and depth as those figures there.

Now, after that presentation, and I am not just going to compliment these people that prepared their lessons so well, Admiral Holloway was there with a personal statement—retired former Chief of Naval Operations, and a very, very well-read and well-developed and extensive mind and an outstanding naval officer, I think. And he made a statement that, even though it was brief, was just overwhelming and convincing. I hope that every member of our full committee, Mr. Chairman, would have a chance to read that statement.

And now we have here today the Secretary of the Navy himself, and I want to ask him a general question here on presenting his thought and his thinking, and why, with reference to the subject matter that I have referred to—and so, let me ask you that general question and general request all in one, to just give your views here in fairly brief—and there is a scarcity of time. I am afraid we will have another vote here soon.

But that is my question, Mr. Secretary.

Secretary **Lehman**. Thank you, Senator. Senator, I think, as you rightly point out, we had a very full ventilation of the issue on Friday and I think that the clear picture was provided to the subcommittee. The source of this initiative is the changed strategic picture that we have in the naval balance today and the development of a new kind of vulnerability that was not there in the 1970's or indeed at any time since the German U-boats used to range off our home ports in the early days of World War II.

We now have a very large, forward deployed Soviet fleet that, as you know, cruises through the gulf every year. We now have a force of diesel submarines that have crews trained up and operate in the Cuban Navy in the gulf. The Soviets have made that huge investment for one purpose. They are well aware of the vulnerabilities of NATO resupply, of having to go through those two choke points, the Straits of Florida and the Straits of Yucatan.

With 85 percent of the Army's logistic reinforcement to NATO, at stake, they now have a new capability in their conventional cruise missile, the capability of hitting targets after 2,000-mile flights fired from submarines. They have the capability to deliver mines in very high numbers from submarines.

They keep that tremendous expense of having 270 attack submarines, nearly three times the number we maintain, for a variety of missions starting with protecting their own strategic submarines. But a major mission that they train for is the delivery of mines. And while we know how to clear mines, every mine laid means an additional delay in deploying our naval and resupply forces.

So, our case for strategic homeporting rests not just on detailed analysis but on common sense. We now have a Northwest United States, with no naval forces and nearly always, a Soviet submarine deployed right off our strategic base at Bangor, WA. We have, as you rightly pointed out now, a new and long-term umbilical of oil through the Gulf of Alaska with no naval forces based along its route. And that simply does not make common sense.

You have quite adequately pointed out the commonsense reason why we now need to have forces homeported permanently in the gulf. The Northeast United States, again, is a major entrepot and resupply area for NATO and homeporting in New York makes sense.

It does cost more money. The figures in the testimony of GAO and the Navy are really not very far apart now, and the cost estimates of what this dispersal rather than concentration will cost. We believe the net cost to the taxpayer, will be about $200 million more, over the 10-year period of this establishment, than if we simply had to make room for them in San Diego, Norfolk, Charleston, and the other smaller home ports.

We have submitted to the committee I believe, a very careful and realistic cost estimate. I think that we have established over these last 5 years the right to be listened to when we give cost estimates.

When we told this committee what we would deliver the battleship *New Jersey* for, we delivered it for that cost. When we told this committee what our shipbuilding program would cost—even as Time magazine put on its cover, a defense official saying that the Navy had underestimated the cost of its shipbuilding for the last 4 years by some $350 billion, we delivered—we have the results for you to judge our cost estimating and our credibility by.

We have underrun, every year, every shipbuilding budget. We have underrun, every year, every aircraft budget. And so, we believe we have a right to be listened to when we say what the cost of the homeporting is going to be. This is not pie in the sky. It is a disciplined estimate of what these home ports will be done for.

Are there going to be people pushing to add numbers of bowling alleys to the existing alleys at Fort Wadsworth in New York? Sure, but we are not going to let those requirements creep any more than we are on the F-18. And every line item that could increase the cost of this estimate will be, of course, submitted to this committee for line item approval. If it were to happen, it would not happen on my watch and I guarantee you that the estimates you have before you are going to be met.

And, for $200 million more this is one of the best bargains that we know of in the Navy budget. So, if we have to take cuts in the future, strategic homeporting will not be cut. We will give up ships.

We will give up force structure, rather than giving up the need to disperse, because we know from deck plate wisdom, not systems analysis or parametric projections, that we will lose ships that we would not otherwise lose if we have to bunch them up and wrap them together the way we are doing today in places like Norfolk, where we have 128 ships homeported in a very small area. And as you know, one Aegis cruiser at $900 million getting hit by a cruise missile or sunk by a mine will make this whole debate look very silly indeed.

Senator COHEN. Would you yield, Mr. Chairman?

Senator STENNIS. Yes; I will.

Senator COHEN. Just to correct, I think it was a Freudian slip on the Secretary's part, he mentioned a strategic base in Bangor, ME, and I do not want anyone under the illusion that we are homeporting with a new facility at Bangor, ME.

Secretary LEHMAN. Bangor, WA, is what the Secretary meant to say. [Laughter.]

Senator STENNIS. My time is up, I understand, but may I have one additional minute, please?

Senator COHEN. You may.

Senator STENNIS. I have here in my hand a copy of the statement that Admiral Holloway made last week in his testimony before the subcommittee, and on this question of cost he sums up in this way. He says clearly, and I am quoting, "Clearly a system of strategic home porting has significant advantages in terms of military effectiveness and industrial readiness. A question that your committee must face: Is this concept worth the additional cost?"

"In my opinion"—now, this is Admiral Holloway, not Stennis speaking—"In my opinion, this country cannot afford not to move quickly into a system of strategic fleet basing. I would point out that the total net cost of such a program would be less than one-half the price of a single frigate."

Now, that is an amazing fact, but I am sure he knows what I am talking about. I thank the Chair for yielding me that additional time.

Senator COHEN. Senator Denton.

Senator DENTON. Well, I want to welcome the gentlemen here this morning. I am sorry Admiral Watkins could not be here. It would have been his last appearance. But, welcome, Admiral Busey. I have great admiration for your record as a naval officer, and I am already friends with Gen. P.X. Kelley and the Secretary.

I guess there are just two points that I would like to make this morning. One, I would not refer to any one of you three. It does refer to other officers and possibly other civilian officials who come before us. It is nothing new, but it is something that is critical today, more critical than previously, and it has to do with the tendency of the officers and officials to answer questions like, "If we cut you 20 percent or 30 percent, where do you want to be cut?"

Things are getting tough. We have got Gramm-Rudman. We have got to do this, that, and the other, and if I ask them a question, this was a flagrant example, "Can you carry out your mission if we cut you by *x* percent," and the guy said unequivocally, yes. He said, and I do not want to get into names and so maybe I had better not mention this specific example.

All I am saying is that I think we are at a point where you gentlemen, not only yourselves, had better say, "If you cut us down to such and such a level we can no longer tell you that we can perform our missions." We can no longer have you believe that you are providing for the common defense. And if we do not do it now, I think we are going to threaten this country's survival more than the professional hypocrisy that some careerists have exhibited in the past when they have talked that way.

I cannot think of a more important point to try to make.

Secretary LEHMAN. I think that is a very good point, Senator, and I would like to ask the commandant and the vice chief to give their own personal views in responding to that question.

This is my sixth annual appearance before the committee and when we first put forward this program I began by saying, "we cannot do this mission today." That was 1981. I echoed Admiral Hayward's statement from the prior year, before I came aboard, that we had a one and a half ocean Navy for a three ocean commitment.

That remains a valid assessment of the situation then. I had said, and continue to say, that until we have a full 600-ship Navy with 15 deployable carrier battle groups, and the full structure that goes with that, and the readiness that we now have, applied to a larger fleet, that we will have to triage commitments. We cannot do the mission today, the full wartime mission, given the national strategy we have.

We will be able to do it when we have our full fleet, but we are some 50 ships short of that. We are two aircraft carrier battle groups short of that. And I cannot say that we can do our mission until we have that force structure because that force structure is not, as some glib critics would say, just pulled out of a hat. It was derived from the most thorough evaluation ever done in this government, which was the National Security Council study that I participated in, in 1974, 1975, and 1976.

It was a logical derivation from the national strategy in every mission where you have to be and what you have to do. You have to move oil. You have to move Army equipment. You have to move Air Force bombs. You have to gain control of certain ocean areas. We have 40-odd treaty commitments that tie us to all of the seven seas. We have to be there, in those vital areas to do the task, and you cannot be there if you ain't got ships.

And so, I say unequivocally, we cannot do our full mission today, but we will be able to when we reach the 600-ship level in 1989.

Senator DENTON. I do want to hear from the other two. I would just want to aid on one corollary, in the case of the Navy. We are missing the forest and looking at the trees if we cannot perceive, as Senators and Congressmen, what I so deeply feel because of the contrast I saw having been out of circulation for a number of years, leaving the Mediterranean Sea in which the only presence of the Soviets when I was in it, in the Sixth Fleet, was two submarines.

And we had as many as four carriers at a time and a couple of guided missile cruisers and all of that, and then come back to a world in which they equal us in ships, where we have gone from a period some decades ago in which we had 40 times the ship days out of area that the Soviets had, and now we are equal roughly to them, with them a landlocked nation and with no need to equal our Navy in order to cut off the communications by sea or the use of the sea as a base of operations.

And so, if I may suggest one thing, that all of them ought to say over and over, no matter what imbalances we have, as gross as they are, we have had them in conventional weaponry, if I may say so, on the land for a long time. We still have them. That does not make them any better.

But to go from a 40 to 1 advantage to a zero advantage with the Navy, when this Nation is dependent upon projection as well as commerce and wartime reinforcement by sea, to me that is missing the forest and not providing for the common defense. And so, it is something that I would suggest maybe we could come up with frequently when we are trying to defend the Navy.

Go ahead, General.

General KELLEY. Let me just add to the Secretary's comments, Senator Denton. I think that probably where we get confused is in the definition of the word "mission." I personally think the mission of the Armed Forces of the United States of America is to terminate war or conflict with the Soviet Union on terms favorable to the United States in the event that that contingency happens.

I have to submit that in every category I look at, if you are talking about putting an M-60 tank against a T-80 tank, you are probably going to lose. If you do not have as much or more sustainability than the Soviet has to sustain himself in combat, then chances are in the end you may lose. If you do not have the quality people to man the quality equipment, chances for your winning are going to be somewhat diminished.

And so, I think if you look at the overall mission of the Armed Forces of the United States, and that is to terminate conflict with the Soviet Union on terms favorable to the United States, I would be hard pressed to see any cuts of any magnitude coming against our budgets and say that we can still perform that mission, if indeed we could perform it today.

Senator **Denton**. Well, you have heard very intelligent men and patriotic men, knowledgeable men, talk in terms of, in today's environment you are going to have to take such and such a cut, and what that amounts to is, we have placed balancing the budget in so many years and in such a way above our mandate to provide for the common defense which is an inversion of our governmental propriety of purpose, and it bothers me to the point of distraction.

General **Kelley**. Senator, I have a great quote I would just like to share with you. Sir John Slessor, in his book says, "It is customary for democratic countries to deplore expenditures on arms as conflicting with the requirements of the social services. There is a tendency to forget that the most important social service that a government can do for its people is to keep them alive and free."

Senator **Denton**. I have used that over and over. General Dixon of the TAC in the Air Force was the first one to use that with me, and I agree with its relevance.

Admiral.

Admiral **Busey**. Yes, sir. Over the last several years we have continuously come back and told you that readiness is increasing, that the spare parts lockers and our ammo supplies are filling up. Our ability from a readiness standpoint to do the jobs that we are asked to do as tasked by the national command authority is increasing.

If a modicum of real growth is not approved, which will continue to help us build to the prudent force that we believe is contained in our budget, in building toward a 600-ship Navy with 15 carrier battle groups, then we will be back telling you that we are back cross-decking weapons again to meet the commitments we have in the Mediterranean, that our retention problems are beginning to increase, deployment lengths will have to go up, which has a deleterious effect on the morale of our people, and our ability to do the job that we are called upon to do will begin to decrease again to where we are back down on our knees as we were 5, 6 years ago.

Senator **Denton**. Mr. Chairman, since 10 o'clock I am supposed to have been chairing a Drug Enforcement Administration oversight hearing, and so I will be permanently gone. May I have 1 more minute? Is that all right with you, Senator Levin?

Senator **Levin**. Sure.

Senator **Denton**. I know everybody is in a bind, and I am absent from the DEA hearing.

Senator **Levin**. No problem.

HOMEPORTING

Senator **Denton**. On the homeporting issue, and I will not take the Senators through what has happened to the budget—they already know that and they already know that we are going backwards and that we promised zero three three when we cut it once now we are going to cut it again, over that which was authorized last year, which to me seems insane.

Terrorism is not something that we now have to address instead of addressing other things. It is something we have to address in addition to other things. The threat of the imbalance in other areas remains and becomes a bigger threat when you have terrorism added to it.

But with respect to the homeporting, how much validity—and before I say that, let me say there have been times, years up here when I have said, let's don't hang in there and say we need this much money when we really do not. But, this is not the time for that and you guys know that at least as well as I. Sometimes we will hang onto what we have got because we think they are liable to take it away, and we do not say we need it.

But, this is not what is going on now and I hope my colleagues can really understand that. The business of homeporting, Senator Stennis touched on it through quoting, I think it was Admiral Holloway, and this aspect of it, I want to make clear, is not the possession of an industrial base which is dwindling among the shipyards, just as much a necessity for mobilization in a war, or keeping us going in peace for that matter, in an economic way.

Is it not just as important in terms of the underruns you have been able to achieve, the competition which you have been praised for by the chairman of the overall committee, to get these small shipyards involved to a greater degree through the homeporting process, because by all of the criteria you use and necessarily so to decide which shipyard does which work, there are relatively few being optimally used in terms of preserving the space.

Is there a way you can develop that, Mr. Secretary?

Secretary LEHMAN. This is a very important factor. We are at a disadvantage, in that there are no recognized parametrics that we can put into the budget to show the savings that we know we are going to get by having a much wider industrial base for the support services that the fleet needs in its day-to-day housekeeping, not just the ship repair but all of the goods and services that a homeported ship requires.

Thirty thousand contractors dropped out of the Navy competitive base in the 1970's as we shrank from 20 home ports to the existing 5, and we need to get back into that competitive base and not just for the big overhauls. Now we have moved, as you know, to compete overhauls, coastwide in most cases.

That was a major step forward. It broke some of the monopolies that the home port companies had held, and it has brought prices tumbling down for the good of everybody. But, now we need to get that same kind of competition in the normal upkeep and goods and services that are bought on the local economic in each of the places.

Now, we are not talking about taking away business from the existing home ports because one of them will really suffer any reduction in ships. We are talking about the additional 130 ships of the Reagan expansion, and using those to tap into a broader competitive base of smaller businesses and service industries in the gulf coast, in the Northwest, and in the Northeast, that now have no way to bid on Navy business.

We are sure that the cost of ownership of these ships will be much lower than had we stuck them all into the monopoly situations that exist in the current home ports. So, it is an important thing and it is not only the cost of ownership in peacetime but having an industry to mobilize in wartime that would not otherwise be there.

Senator **Denton**. Thank you, Mr. Secretary. Thank you, Senator Cohen, for your indulgence, and Senator Stennis and Senator Levin.

Senator **Cohen**. I will now yield to the ever-patient and persistent Senator Levin.

Senator **Levin**. Thank you, Mr. Chairman. First, let me welcome all of you. I want to commend your personnel and your agency for the professionalism with which the strike against Libya was carried out. We are all proud of our Armed Forces. It was a complicated mission and it was carried out with great efficiency and professionalism, and I just want to add that—I know others have said that this morning, but I think it is important that you hear that as often as possible on the Hill because you get a lot of hopefully constructive comment from the Hill on other occasions, but I think it is important that you hear from us just how proud we are of you, and of the Navy in this case and of the Air Force. I do not know that the Marines had a role.

Secretary **Lehman**. Yes, indeed. Two squadrons of Marines are on the Coral Sea. Thank you, Senator.

LIBYA

Senator **Levin**. I have a couple of questions, first on the Libyan situation. We have heard there is a couple of subs the Libyans have in the Navy, and I am wondering whether or not you feel confident that we can handle any threat that they might provide.

Secretary **Lehman**. In the Libyan case we do have that confidence. Modern diesel subs operated by well-trained people are very valuable military tools but their uses are very different than a nuclear submarine, they become very real concerns and threats when a battle group has to stand still. It is what we call modlocked, put in an area and kept there.

A diesel operating on a battery is a very, very tough antisubmarine problem. In fact, the only way to get at it is by nuclear attack submarines and by active antisubmarine measures from aircraft and surface ships.

In the case of the Libyan submarines, we have all of those assets available, including nuclear attack submarines and the latest Lamps MK-III helicopters, and Lamps MK-I helicopters. We have the latest antisubmarine warfare arrays, both passive and active. We are confident we can handle that threat.

Senator **Levin**. You have testified this morning, I believe, in response to Senator Thurmond's question, that you are prepared to dismantle or drydock or overhaul the two Poseidon submarines relative to the SALT II limits.

Secretary **Lehman**. Yes, sir.

POSEIDON SUBMARINES

Senator **Levin**. I just had a question or two on that issue. If the President decides to drydock the two Poseidon submarines instead of dismantling them, what are the impacts on the Navy relative to costs, to personnel manning organizationally of that decision, how much would it cost you?

Secretary LEHMAN. The costs are really not significant. They become so over extended periods because we do have to maintain watches on the reactor. We do have to have personnel assigned to them, certainly not nearly to the extent we do if it were kept active.

Senator LEVIN. Could you give us the comparative cost between drydocking and active maintenance of those two subs on a yearly basis? Could you give us an estimate?

Secretary LEHMAN. I will provide that for the record this afternoon.

[The information follows:]

COSTS TO DRYDOCK TWO POSEIDON SUBMARINES

Drydocking is not the term that best describes the plans which have been discussed to put these submarines in a "caretaker" status for up to one year. The ships could be in drydock for about five months to defuel their reactors, but would be returned to the water for the remainder of the period. Such an effort would cost about $17 million per submarine.

However, the manner in which this option would be executed and hence its cost, have not been finalized.

COSTS TO DISMANTLE TWO POSEIDON SUBMARINES

The dismantlement and deactivation of each Poseidon submarine would cost approximatley 20 million.

COSTS TO OVERHAUL POSEIDON SUBMARINES

SSBN overhaul costs vary with each ship depending on the scope of the work. Since these are refueling overhauls, they would require about two years to complete and cost from $130-170 million per ship. The ships would have 5-6 years of useful service life after overhaul.

UNIT COST OF A TRIDENT SUBMARINE

In fiscal year 1986 dollars, the unit cost of a Trident submarine is $1.5-1.6 billion, exclusive of missiles, but including all GFE.

UNIT COST OF D-5 MISSILES

Current estimate of the total program procurement unit cost is $30.9 million. The actual unit cost of the missiles required to outfit additional Trident submarines would be somewhat less than this figure because we would be somewhat less than this figure because we would be on the inexpensive end of the learning curve.

OPERATING COSTS FOR A TRIDENT SUBMARINE

The annual operating costs for a Trident submarine total approximately $15 million.

SOVIET SSBN DISMANTLEMENTS

The Soviet Union has dismantled (removed the ballistic missile section from) 14 Yankee-class ballistic missile submarines since 1978.

Senator LEVIN. How long would it take to return the *Poseidons* to operational status if they were drydocked?

Secretary LEHMAN. Again, it would be a function of how much we invested in laying them up as opposed to deferring overhaul until reactivation and, then how long you wanted them to operate once they were reactivated. If you wanted to reactivate them for the first 6 months of a potential war, then the cost would be much lower than if you said, well, now, we are going to reactivate them for 3 to 5 years.

Both of these submarines would require major overhauls to be put back out on extended patrol duty. They would not need major overhauls for short duty, for instance if they were needed for strategic reserves. We will provide those figures.

Senator LEVIN. We would appreciate your getting those figures for us and also, for the record, how long it would take for extended duty to overhaul them if they were once drydocked.

Secretary LEHMAN. Yes, sir.

Senator LEVIN. What is the estimated remaining operational life of two *Poseidons* scheduled for dismantling?

Secretary LEHMAN. Essentially about 8 years, including overhaul time for each of them, assuming they were overhauled. We probably could get by with one full major overhaul on each of them to get that 8 years, but it may involve a reduced operational tempo in the latter part of their lives.

Senator LEVIN. Do you know how many Soviet submarines have been dismantled in response to the SALT II Treaty limits?

Secretary LEHMAN. I will provide that for the record. I believe it is on the order of 10 or so.

Senator LEVIN. If you could give us that for the record, that would be fine, too.

Senator COHEN. Excuse me. Have they been dismantled or converted into other ships?

Secretary LEHMAN. Most of them we do not know about yet. We have seen one we deployed as a cruise missile carrier. There are others going into conversion as attack submarines, and we have not seen what the rest of them are going to come out as.

MIDGETMAN

Senator LEVIN. Just a question on the Midgetman Program as to whether or not it would make more sense to deploy a similar size force on Trident missile subs. The suggestion has been made that it is going to cost us roughly $50 billion to put 500 warheads in the Midgetman missile force. Our estimate is that we could put 500 warheads on two Trident missile subs.

You probably know it by heart anyway, but without going through the math roughly 240 per sub if there was an average of 10 warheads on 24 launchers on those assumptions.

What is your thought about that?

Secretary LEHMAN. I think that is true.

Senator LEVIN. In terms of whether or not that would make some sense or ought to be looked at as a feasible possibility?

Secretary LEHMAN. I cannot really editorialize on that. I can only say that certainly we can deploy more Tridents. I do not know where the money would come from, but there is certainly no question of those Tridents being as vulnerable or more vulnerable than the Midgetmen. They are, in my judgment, much less vulnerable than the Midgetmen, but, of course, we need to maintain modernization of all three legs of the triad.

So, as to tradeoffs between them, I am not in a position to say. I can say that certainly if more were deployed, they would be as invulnerable as the current Tridents are which is about as absolutely invulnerable as any strategic system can be.

Senator LEVIN. How much does it cost to deploy two additional Tridents, roughly, in current dollars?

Secretary LEHMAN. In current dollars the fully operational sub is about $1.5 billion apiece, and the crew costs and operating costs might run as high as $30 million per sub counting infrastructure and then there is additional cost of the Trident missiles themselves. I would have to provide the unit cost for those.

That would be a rough order of magnitude. But, I would not recommend giving up Aegis cruisers or SSN-688 class submarines to buy those.

Senator LEVIN. I am talking about a tradeoff between the Midgetmen and the Tridents, not between the cruisers and the Tridents. I think your point was well made earlier this morning.

PAY COMPARABILITY

One question, General Kelley, on your chart on page 13 about relative pay comparability, the way it looks to me we have a greater gap now between military and private sector wage levels than we have had for at least 10 years. The 1985 gap was a minus 8, and the closest gap we have had to that looks like about a minus 7 in 1980.

Am I reading that correctly?

General KELLEY. You are indeed, sir. I think right now it is 8.3 percent, the gap between the military and the private sector wage levels.

Senator LEVIN, Now, given the projections of the Budget Office for 1987 on private sector wage levels and given what is in the budget, what would that gap be for 1986 and 1987? Can you project those gaps?

General KELLEY. I can get that figure for you, Senator, but I do not have it off the top of my head. I would be more than happy to provide it for the record.

[The information follows:]

General KELLEY. The Office of Management and Budget [OMB] projected civilian wage growth for fiscal year 1987 is 4 percent. The President's proposed 4-percent pay raise would maintain the military pay gap with private sector at the fiscal year 1986 level of 8.3 percent.

Senator LEVIN. Thank you so much. My time is up. Thank you, Mr. Chairman.

Senator THURMOND [presiding]. Thank you.

Senator Exon.

HOMEPORTING

Senator EXON. Mr. Chairman, thank you very much. Gentleman, welcome to the committee. Last week the GAO testifed that the Congress does not have enough cost information to make a sound decision to proceed with the home porting plan at this time. Why do you feel otherwise?

Secretary **Lehman**. I feel otherwise, because I believe we have done a very honest and thorough assessment of each of the sites. We took nearly 2 years on each site, and we applied the same rigor that we have applied to the overall change of the way we do budgeting in the Navy Department.

As I said while you were out, Senator, I think we have a claim to credibility that has earned us the right to be listened to on our cost estimates. We did not just arrive here. This is the sixth year of our team, and starting with the first major issue is 1981, when I proposed the budget for the battleship *New Jersey,* we have delivered every major system within the cost estimates that we put in the budget.

In fact, we have average $1.5 billion under those cost estimates, even as Congress was being warned that we were lowballing. So we believe that we have earned the right to be judged by results.

When I give you a number, Senator, it is not pulled out of the sky. It is one that I know I am going to have to live with because I do not intend to leave tomorrow.

Senator **Exon**. Mr. Secretary, in this and other hearings this Senator and others, in light of the budget squeeze we are in, have brought up facing the fact that we are not going to have anywhere near the figure that the President's budget projected for defense.

If we had adequate funds to take care of all of the more important needs of the Navy, then I would not quarrel with the home porting proposition, per se.

Now, is it not true, Mr. Secretary that if the home porting proposition goes forth just as you envision it, only 64 ships out of the total 600 ship fleet in the Navy would be moved into these new ports, in other words, 64 out of 600, about 10 percent? Is that not true?

Secretary **Lehman**. I would not want to quibble with those numbers. I think eventually it will be more than that but, because the original intention is to largely distribute the 130-ships increase, the initial homeportings will be approximately the number you said. As the fleet continues to grow, that number will grow commensurate with the 600 level.

In any case, let us just talk about those 64 ships. To me and all of us in the Navy, that is well worth the dispersal of those ships. We had a very interesting colloquy earlier this morning. Senator Cohen made the point about the shift in our strategic dependencies today, whereby we get twice as much oil through the Gulf of Alaska as we get from the entire Middle East, and yet, we have no military naval presence up there.

In addition, our most valuable strategic asset, our 10 Trident submarines, are unprotected at Bangor, WA. They are right by the Straits of Juan de Fuca, outside of which there is a permanently deployed attack submarine presence nearly all the time. Yet, our forces, are 1,700 miles away, down in San Diego. That does not make sense strategically, and it is going to mean that we will lose ships if the war ever comes. We are going to have delays. We are going to have mining, and cruise missiles attacks, and it is going to cost us by not having the ability to deter those kinds of attacks in that area.

By dispersal, we are going to make the task of mining and attack by cruise missiles far more complicated and difficult than without it. I am prepared to make this flat statement today that if we have to take budget cuts, we are prepared to give up ships rather than give up those home ports.

As Senator Stennis rightly pointed out, the delta costs, of all of those home ports when they are all fully executed, is the price of one-half of a FFG-7 frigate. Frankly, I think that the argument stands on common sense.

We know that the Soviets are doing today what they were not doing 5 years ago. We know that they now have deployed these subs off our home ports with the express purpose of interdicting and delaying our ability to sortie minesweepers, and so forth. Every day of delay could be of immeasurable help to the Soviets, and every mine they lay will translate into delay if we are not better able to deploy our fleet.

We got into this position of having 128 ships, by the way—not the 90 that the GAO says—but 128 ships today in Norfolk and 104 in San Diego, by closing all the other home ports because of the budget cuts of 22 percent during the 1970's. It is not because that is what the Navy planned or wanted to do. We did it because we had to do it. We were forced into it by a 22-percent cut.

Now, we are not proposing to go back to the 22 home ports that we had in the early 1970's. We are proposing to expand modestly into those vacuums of naval presence that we have today around our coast and doing it in a way that is innovative and very low cost and which takes advantage of existing infrastructure, like Fort Wadsworth in New York and the local facilities in the gulf home ports. We will not have to reinvent the bowling alleys and the chapels and the child care centers by taking advantage of the infrastrucure that is there.

So we are confident we can do it for about $200 million more than it would cost us by taking the 64 ships and sticking them into the already overcrowded existing home ports.

Senator EXON. Let us return, Mr. Secretary, to the fact that under your projection, as I understand it, we will be moving maybe only 64 of the 600 ships into these ports to begin with. It seems to me you can make a pretty good case. I buy your matter about dispersing the fleet from that standpoint.

If we had the money to do it, fine. I do not think we have the money, Mr. Secretary, and that is one of the reasons that I keep trying to force on all sections of the military the fact that they are going to have to help us make some very important decisions up here.

I think this authorizing committee has not always agreed 100 percent. I think we have done a pretty good job, both in the subcommittee and in this committee, to go along with the premier programs of the U.S. Navy.

I am simply saying that I guess I am not yet convinced that, as important as this might be and as important as some of the other concerns that we rely upon our great U.S. Navy to protect this country in times of extreme needs, I am not sure that this is the time to press forward on this.

P-3 PLAN

Mr. Secretary, what about the P-3 plan? Where do they fit into this?

Secretary **LEHMAN**. The P-3 plan that we have for this year calls for nine aircraft. Last year, Congress gave us some flexibility to trade off between nine aircraft and five, and use the difference, if that made cost-effective sense, to modernize the older P-3's by retrofitting them with modern P-3 Update III avionics. I welcome that type of flexibility that was given to us, and I hope we get the same flexibility this year. It is very helpful in negotiating, and it makes for a lot more sensible business approach.

In the preparation of next year's budget, what the Navy will be recommending, in a 2-year budget, is the transition to a competition for 125 P-3D's, with the Update IV avionics package, to be bought in a "winner-take-all", fixed-price competition over a 5-year period. That is the program that we will be recommending for the President's 2-year budget next year.

We have reached the decision that the P-3 airframe with the new V-22 engine, is the optimum airplane for antisubmarine warfare in the 1990's. We do not like having to deal with a monopoly supplier. Even though Lockheed is a very fine company and has performed well, we think we are paying too much money for those aircraft which we have been buying in a sole source monopoly situation these many years.

Senator **EXON**. My time is up, Mr. Chairman. I will ask just one last question for the record to save everyone's time. You have mentioned the mine problem, and I think it is a real problem. We have talked about it on many occasions.

MINE COUNTERMEASURES

We are having difficulty with the MCM and the MSH construction contract not coming up to speed, as I understand it. Are you still supporting actively mine countermeasure ships numbering 31, as I understand it? How far along are we on that program, and how far behind schedule are we?

Secretary **LEHMAN**. Essentially, we have three elements that we depend on for mine countermeasures, in addition to our allies, whom we count on to shoulder the principal burden of minesweeping in the NATO theater. They have very fine minesweepers and minesweeping forces.

We have a combination of 31 MCM's for deep water and MSH's for coastal and harbor waters. We have the COOP Program to use fishing and utility vessels with minesweeping equipment on them. And we have the two helicopter minesweeping squadrons which proved so effective in the Gulf of Suez and clearing Haiphong in times past.

The MCM and MSH Programs are in very different time phases. The MCM Program has probably been the most poorly managed shipbuilding program on the part of both the Navy and the contractor, of any program that I have seen in the 5 years I have been here. We are not happy that we have not worked out the bugs yet.

I can assure you that we will let no contracts until those bugs are worked out. We did go back and force a fixed-price cap on the first two ships that had been cost plus, and now we are competing the two producers on a fixed-price basis.

So, I fully support going ahead with those numbers of ships. The MSH is a smaller ship based upon a new technology—a surface effect ship, an air bubble sea skimmer.

Senator EXON. How is that coming?

Secretary LEHMAN. That is not coming as fast as we would like at this point. We did some shock tests at a very severe level because we wanted to start with the most rigorous testing; far higher shock testing, for instance, than any of the European designs have ever been subjected to.

We found we had delaminations. We had problems with the GRP, the glass-reinforced plastic structural material. This was the first time these contractors have worked with this material. So, we are not approving going into production on this ship until we have further shock testing to assure us that the structure and the process of this material are married in this new hull form in a satisfactory way.

We will be keeping the committee fully up to speed on those testing results as they go along. We will let no contract until we have that process and those specs warrantied in the contract. So there will be some delay.

I would not recommend that you translate that into deleting MSH's from the budget at this point, however, because what we are talking about are contracts that would be let until a year plus from now at the earliest. We certainly have every intention of having those problems worked out by then.

Senator EXON. Gentlemen, thank you. Admiral and General, you need no one to speak for you. If you did, the Secretary does a pretty good job. We are delighted to have you.

Thank you, Mr. Chairman.

Senator THURMOND. Thank you, Senator.

Mr. Secretary, I had to go and open the Senate. I believe there were a few questions asked you on homeporting, and I am not going into that in any depth.

I would just like to mention this point to you. As I understand, you have been working to try to get these different communities to make these big contributions to this effort, have you not?

Secretary LEHMAN. Yes, indeed. That was a 2-year effort in each case, and we found the community responses to be very, very heartening and encouraging. In Everett, where we had one of our most ambitious projects, there was a referendum put on the ballot in which the people of Everett voted 70-to-30 in favor of bringing the Navy in. That has been representative of everywhere we have gone in the gulf, in the Northeast and in the Northwest.

Senator THURMOND. Now, have these different locations met your expectations as to their contribution? I have heard some suggestion that the gulf ports had but you were not quite sure that Everett, WA, had or that New York had.

Secretary LEHMAN. First, the approach we took was not of running an auction and setting a level of people contributing with bond issues, as they did in Corpus Christi, and so forth, but it was to find the lowest possible cost that would meet the military dispersal.

In the gulf, there was the most overwhelming response from all of the populations and the largest dollar contributions by the States and the local governments. In New York, however, there was a very substantial contribution in terms of providing the land that had been designated for park area with essentially a no-cost lease. They also contributed some $15 million and are making available a lot of other facilities. They are making available land on the south beach area for housing. So I think there was a substantial contribution in New York.

In Everett, we have not had as significant a contribution, particularly from the State, but we have gotten a package through the all-out effort of the local people in Everett, that has brought in about $320 million when the original estimate was $600 million.

So we have had a lot of cost avoidance from the local population making available sites that had been designated for other things. They are contributing to road infrastructure. It is less than in the gulf primarily because, as you know, the Everett area has been under a severe economic depression with the decline of the forestry industry and the other industries in the area.

I believe that the people of Everett have gone beyond what we might expect, even though the actual dollar contribution has not been what it has in the oil-rich States of the gulf. For instance, in Texas, $25 million was contributed by the State and $25 million by the people of Corpus Christi. So, we think we have good packages, the lowest cost pakages, in every area coupled with the enthusiastic and popular participation in each of the home ports.

Senator THURMOND. In New York and Washington State, have the local people agreed to take care of the expansion of schools and utilities and things of that kind?

Secretary LEHMAN. They have, indeed, in principle. Of course, the issues of impact aid on the school population that are part of every base are dealt with on a separate venue. They certainly have made every commitment that we have asked for in terms of making available housing and schools, and so forth. So we are quite satisfied.

Senator THURMOND. This will be a great addition to the economies of the areas if the homeporting is approved. The people generally, I think, feel that the local communities, since they will share in the benefits, should be willing to share in the expenditures.

Secretary LEHMAN. That is a principle that we have insisted on as a starting point for each of these home port efforts.

Senator THURMOND. Are you still working with the local communities there to try to get them to do more if, in any instance, they have not done what you think they ought to do?

Secretary LEHMAN. Yes, sir, and there are always some areas of honest disagreement as to what specific levels are appropriate.

We are having discussions, right now, regarding how much of a roadway will be built in Everett, whether it will be a raised causeway or whether it will go through the town. Those are the normal kinds of discussions on which we have to reach agreement.

Senator THURMOND. If you feel there are any localities that are not doing what they should, are you in a position to withhold going forward until you do get what you think is reasonable and proper from the community?

Secretary **Lehman**. Yes, sir, and I would not mind at all having language to that effect in the committee's report. That would strengthen our hand; not that we need strengthening, but down the road we might when it comes time to pay the piper. So it would be helpful to have that admonition from the committee.

Senator **Thurmond**. The committee will be holding a hearing on this, I believe, a week from Monday. If you have any suggestions prior to that time, I wish you would get them to us. We would also appreciate your sending any proposed suggestions as to wording along the lines we are talking about so that they may be considered, too.

Secretary **Lehman**. Yes, sir. I will be happy to do that.

Senator **Thurmond**. Could you get that to us right away?

Secretary **Lehman**. Yes, sir.

Senator **Thurmond**. Senator Exon.

Senator **Exon**. Two quick questions, Mr. Secretary. You mentioned the economic difficulties in Washington State, and then we talked about those oil rich States in the gulf. They are not quite as oil rich as they were when they made this commitment.

Is that commitment still good? Is the money in the bank, or is it just an indication that they will come forth with it? How solid is that?

Secretary **Lehman**. We are assured that the check is in the mail, Senator. [Laughter.]

Senator **Exon**. Would you say that again? [Laughter.]

Secretary **Lehman**. They have said trust us on this one, Senator. We believe the commitments are very solid. If there were any backing off from them, that would force us to reopen the decisions.

Senator **Exon**. That leads me to my second and last question, Mr. Chairman.

Suppose, Mr. Secretary, that this committee would tell you that we cannot go with the full plan that you have outlined because of cost restraints. Do you have a second alternate optional plan that you would offer, a scaled down version with not as many homeporting sites which would cost less money that you could offer the committee?

Secretary **Lehman**. Obviously we would have to regroup and get as much as we could because of the military requirements. Again, I would underline, if it came to that, we would come back to you and say, "Look, take out a ship from our shipbuilding budget or take some of our weapon systems to make up for the money to put back in."

We would rather give up new construction ships than sacrifice the survivability and readiness that this initiative represents.

Senator **Exon**. Would you go so far as to say you might want to give up a Trident for homeporting?

Secretary **Lehman**. I would hope I never have to face that choice, but, if I were given that choice, I would certainly do that. We have an urgent military requirement that was not there 5 years ago because the Soviets were not there 5 years ago. Now they are.

Senator **Exon**. Mr. Secretary, I have a great respect for you, as I think you know, and we agree on many things. Some things we do not agree on. As important as I think that Trident is to us, I think there is no more important program in the whole military than that Trident boat and what it does for us. At least, I am not convinced that it would be wise to make that determination.

I recognize you as an expert in this area, and I would like to hear more of your rationale.

Secretary LEHMAN. We will let the record show that the Trident would not be my recommendation for an offset for homeporting. I think we would be prepared to give up other ships necessary to compensate if we were forced into that situation. Again, we are talking about the entire program costing only $200 million more than if we are forced to fall back and stuff them back into the existing home ports.

Senator EXON. Would you also, Mr. Secretary, if you were forced to do it, recommend giving up an SSN-21 for the homeporting?

Secretary LEHMAN. This is the type of prioritization that I would really prefer not to do. I think that would be a foolish tradeoff and an unnecessary tradeoff, because there are other ships in the program that $200 million could be gotten from without going to the highest priority programs that we have.

Senator EXON. If I might, Mr. Chairman, give our other two distinguished witnesses a chance, do you agree with the assessment that the Secretary has just made with regard to trading one or two of the Tridents or one or two of the SSN-21's to expedite homeporting? Are your priorities the same as the Secretary's in that regard?

Admiral BUSEY. Senator, I did not hear the Secretary say he would be willing to tradeoff a Trident or an SSN-21 for homeporting. I heard him say that he would be willing to tradeoff forcestructure or consider other ships if he were pushed to that choice.

Yes; the blue suit Navy is in full agreement. We consider the strategic homeporting a very important initiative. Of course, we are in entire agreement with the Secretary to tradeoff forcestructure to achieve that.

Senator EXON. General Kelley, I am not going to ask you to make a decision on whether or not we should tradeoff a Trident or the new attack submarine.

Do you think we should tradeoff amphibious ships? [Laughter.]

General KELLEY. I am not touching that one with a 10-foot pole, Senator. [Laughter.]

Senator EXON. All right. Thank you very much, gentleman. Thank you very much, Mr. Chairman.

Senator THURMOND. Mr. Secretary, can you get your proposed wording to my office by tomorrow night and give it to my personal secretary?

Secretary LEHMAN. I will have that to you.

Senator THURMOND. I would like for you to make that as strong as possible because sometimes when communities are considering these things if they think they can get something without contributing, they may do it.

I have been urged by some members of this committee that we have got to take steps to nail this down before this is approved, and I would like the strong wording on that.

Secretary LEHMAN. I will have a draft to you by tomorrow.

Senator THURMOND. Now, as I understand if we go to homeporting it will cost about $200 million more than if you placed the ships in the present locations, but you feel it is worthwhile because of the dispersement and the protection and the security you can give those ships. In essence, is that it?

Secretary **Lehman**. That is the nub of the argument, Senator.

Senator **Thurmond**. Secretary Lehman, I want to express my appreciation to you, Admiral Busey and General Kelley for this splendid testimony you gave here today.

[Questions for the hearing record with answers supplied follow:]

Questions Submitted by Senator Barry Goldwater

INVENTORY

Senator **Goldwater**. Admiral Busey, the recent events in the Med indicate the high state of combat readiness of the fleet. From all reports, the aircraft and weapons systems performed superbly. The reports also indicate that a considerable number of smart weapons were expended.

Last year we were told that cross-decking of certain smart weapons was still required. This year's budget request shows almost across-the-board reductions in air-launched weapons.

My question then is do we have adequate inventories of air-launched smart weapons?

Admiral **Busey**. No, sir; we do not have an adequate inventory of smart weapons. The funding requests lead the inventory generally by 2 years and in some cases the procurement is, in fact, being reduced in anticipation of deliveries from previous budgets. There is still a requirement to cross-deck certain weapons and this will continue until the inventories begin to reach such a level that each ship is fully loaded before it deploys. In the next few years, the Navy will begin to really see the benefit of this and the past budgets as the inventory begins to fill up. Many of the reductions in the requested budget are the result of funding constraints and higher priority efforts. You will note that the funds requested for the smarter air-launched weapons did actually increase over last year's request.

Senator **Goldwater**. Admiral Busey, last year I asked Admiral Watkins what he thought was the most serious challenge for our naval forces—antisubmarine warfare, antisurface warfare or antiair warfare. He answered: "I would have to respond that the biggest challenge in the future would be under the seas."

If this is the case, Admiral Busey, why does your 5-year budget this year cut back torpedo procurement by 23 percent compared to last year?

Admiral **Busey**. The programmed procurement of torpedoes is a portion of the Navy's total program to address the challenge "under the seas." The total program includes an aggressive sensor program, to address the trend in Soviet submarine quieting, torpedo defense to counter the current Soviet torpedo threat, active ship class upgrades and technology integration into the reserve fleet in addition to our weapons procurement and development. Torpedo procurements were reduced during fiscal year 1987 budget formulation because of fiscal constraints.

Questions Submitted by Senator John Glenn

NAVY'S ACQUISITION MANAGEMENT PROCESS

Senator **Glenn**. Mr. Secretary, I complement you on the Navy's efforts to improve acquisition management. My concern is that with increased use of competition, such as the dual source approach in the V–22 program, and tough, firm fixed price negotiating, that programs either have to be fully funded by Congress or canceled.

Is this a valid concern? If so, is a procedure needed to identify these type programs to the Congress so we will at least know that if these FFP contract programs are cut we run the risk of canceling the existing contract and/or program?

Secretary **Lehman**. It is important that Congress be aware of those programs that are under firm-fixed-price contracts and the ramifications of not fully funding those programs. Competition has resulted in over $4 billion in cost underruns over the last 3 years. Contractors have competed in good faith and with the expectation that funding reductions and program cancellations will not occur after negotiations are complete and contracts are signed. If they do occur, the types of savings that have resulted from competition in the past will disappear. For those contracts not fully funded, the Government will have to renegotiate from a much less desirable position. The sole source, cost plus contracts of prior years will return with their attendant exorbitant unit costs. Canceled programs will have an even more deleterious effect. Every item in our budget has been derived from the Navy's Maritime Strategy which in turn is derived from the National Strategy. Outright program cancellations cannot help but damage our ability to carry out that strategy. The following programs are examples of firm fixed price programs where budget cuts would result in canceling existing contracts and/or programs:

A-6F, A-6 Wing, ADCAP Torpedo, AN/AYK-14 P³I Computer, AV-8B, CAINS II Ring Laser Gyro Inertial System, Close In Weapons System, EA-3B, E-6A, F-14D, Navy Common Ejection Seat [NACES], SSN-21 Design, SSN-688, AN/SSQ-62 Sonobuoy, Standard Attitude Heading Reference System, Standard Missile-2, T-45TS, T-56 Engine (E-2C), Tomahawk, V-22, V-22 Engine, and Vertical Launch System.

In summary, your concern is a valid concern.

Additional examples can be found in selected acquisition reports, unit cost reports, congressional data sheets, budget justification and backup books, and contract award reports. In fact, the sheer volume of reports may be hindering your ability to determine the information you need to make your decisions.

Recently, I forwarded a recommendation on improving the acquisition reporting process under section 139a, title 10, United States Code as directed in S. 1160, the Department of Defense Authorization Act, 1986. That recommendation included:

Canceling the selected acquisition report; canceling the unit cost report; implementing the DAR/PAR—development/production; acquisition report as a replacement for both the SAR; and UCR, for a 1-year trial basis beginning in December 1986.

Senator THURMOND. If there is nothing else now, we will stand adjourned.

[Whereupon, at 11:11 a.m., the meeting was adjourned.]

DEPARTMENT OF DEFENSE AUTHORIZATION FOR APPROPRIATIONS FOR FISCAL YEAR 1987

THURSDAY, APRIL 17, 1986

U.S. SENATE,
ARMED SERVICES COMMITTEE,
Washington, DC.

AIR FORCE PROGRAMS

The committee met in open session, pursuant to notice, at 9:07 a.m., in room SR-222, Russell Senate Office Building, Senator Strom Thurmond presiding.

Present: Senators Thurmond, Warner, Cohen, Wilson, Bingaman, and Dixon.

Staff present: James F. McGovern, staff director and chief counsel; Robert G. Bell, Robert F. Bott, John J. Hamre, William E. Hoehn, Jr., Carl M. Smith, and John Wildfong, professional staff members; Russell C. Miller research assistant; and Karen A. Love, staff assistant.

Also present: Romie L. Brownlee, assistant to Senator Warner; Robert P. Savitt, assistant to Senator Cohen; James M. Bodner, assistant to Senator Cohen; Mark J. Albrecht, assistant to Senator Wilson; Allan W. Cameron, assistant to Senator Denton; Alan Ptak, assistant to Senator Gramm; Francis J. Sullivan, assistant to Senator Stennis; Janne E. Nolan, assistant to Senator Hart; Jeffrey B. Subko, assistant to Senator Exon; John B. Keeley, assistant to Senator Levin; Thomas K. Longstreth, assistant to Senator Kennedy; Edward McGaffigan, Jr., assistant to Senator Bingaman; Charles C. Smith, assistant to Senator Dixon; and Milton D. Beach, assistant to Senator Glenn.

OPENING STATEMENT BY SENATOR STROM THURMOND, PRESIDING

Senator THURMOND. The committee will come to order.

The committee meets in open session this morning to receive testimony on the posture of the U.S. Air Force.

Chairman Goldwater regrets that he is unable to be with you this morning. As you know, he holds a particularly warm spot in his heart for the Air Force. I am glad to say he told me he withstood the operation well and expects to be back next week.

I welcome our witnesses this morning. The Honorable Edward C. Aldridge, Jr., the Acting Secretary of the Air Force, is appearing before the committee for the first time in this capacity. We have great respect and admiration for the work you have done for the

Air Force as the Under Secretary since 1981 and we look forward to working with you in your new role.

Mr. Aldridge. Thank you, Mr. Chairman.

Senator Thurmond. Gen. Charles A. Gabriel, Chief of Staff of the Air Force, is no stranger to this committee, having served in his current duties since July 1982. I understand that you will be retiring this year, General, and I want to commend you for a very distinguished career, and especially for the outstanding leadership you have provided the Air Force over the past 4 years.

General Gabriel. Thank you, Mr. Chairman.

Senator Thurmond. As you gentlemen know, the committee has held a majority of its hearings on the details of the fiscal year 1987 budget request, and thus has the advantage this year of having focused on the issues in each of the warfare areas prior to today's posture hearing.

No issue is of more concern this year than the implications for defense of the deficit reduction measures that will be considered by the Congress. Because the bulk of reductions have historically come out of procurement and research and development accounts, the prospect of significant reductions needs to be of particular concern to the Air Force, since Air Force programs represent 41 percent of the total Department of Defense research and development and procurement request that is before the Congress.

Your statement cites the considerable progress that has been made in the past 5 years in every area of your responsibility. Nowhere has this been more pronounced than in the strategic area, where the Air Force has the majority of the responsibility, and where we will see later this year the on-time initial operational capability of two major parts of the President's strategic modernization program in the B-1B and the Peacekeeper missile.

We also applaud the progress you have made in conventional combat capability as manifested in your exercises, and most recently in the brave actions of your F-111 pilots who carried out the raid against Libya.

The grave concern of this committee is that the very real progress that has been made over the past 5 years is in danger of being reversed. We have received the intelligence assessments of the extensive Soviet modernization programs in every area of warfare. There is nothing in these assessments that suggests that we can or should slow the pace of our own modernization. Yet the realities associated with the levels of defense reduction now under consideration would do just that.

This committee has been a strong supporter of our military personnel, and of the readiness and sustainability initiatives that permit our people to do their job in a safe and effective manner. We agree with you that support for our men and women in uniform, and for their quality of life, is of central importance.

We recognize, too, that the tremendous improvements in the quality of people recruited and in their retention would be fragile indeed if there is, or is perceived to be, an erosion in pay or in quality of life.

Gentlemen, quite frankly, we are going to need your help this year in trying to strike a balance between deficit reduction on the one hand, and the competing priorities of the Air Force on the other.

We look to your testimony today to shed some light on the relative priorities that we should attach to personnel, to the readiness and sustainability of existing forces, to modernization and expansion of existing forces with systems in production, and to the research and development that is required to stay competitive with the threat we see 10 or 20 years down the road.

I understand, Mr. Secretary, that you wish to summarize your prepared testimony before we begin a round of questions by Senators.

Mr. ALDRIDGE. Yes, Mr. Chairman.

Senator THURMOND. The statement of Senator Dixon will be inserted for the record. We will also place your statements in the record. If you will just summarize it at this time, we would appreciate it.

[The prepared statement of Senator Dixon follows:]

PREPARED STATEMENT BY SENATOR ALAN J. DIXON

Mr. Chairman, we are here today to receive testimony from the Air Force on their funding request prior to our consideration of the fiscal year 1987 Department of Defense authorization bill.

The Air Force has requested Congress to authorize funds for 40 tactical air wings. Yet the Air Force is requesting only enough money to purchase 24 percent of its needed war time spares.

Perhaps, Mr. Chairman, the Air Force should consider lowering its sights, to only 37 tactical air wings, and concentrate on building up its wartime spares. Then should the occasion arise, they will be able to fly more than one or two wartime sorties.

Thank you, Mr. Chairman.

STATEMENT OF HON. EDWARD C. ALDRIDGE, ACTING SECRETARY OF THE AIR FORCE

Mr. ALDRIDGE. Thank you, Mr. Chairman.

I am pleased to report to you that our Air Force is in the finest shape it has ever been in. It can do more, do it better, and achieve better results than ever before. This fact reflects the support of this committee, this Congress and the American people over the past 5 years.

The results of that support were demonstrated Monday night in our attacks against the targets in Libya. The flying skills, operational coordination, and dedication of the crews involved all reflect the quality of our people, equipment, and training.

But we are facing difficult times. There is a need to control the Federal deficit, but we also need to continue the restoration of our military strength. Thus, I am pleased to be here today to discuss the Air Force programs.

Your questions will be the most important part of our appearance, so I will be brief in my informal remarks.

I would like to touch quickly on three important issues.

The first issue is the threat. We have made great progress over the past 5 years in rebuilding our Armed Forces to better meet the threat. Our readiness is up. We can sustain our forces longer in combat, move our forces more quickly and we have newer and more accurate weapon systems.

However, this progress is not enough to meet the ever growing and ambitious buildup of the Soviet Union. Both advocates and opponents of our current and proposed spending levels admit that the threat has not decreased or diminished. It is increasingly clear that the Soviet Union is developing a warfighting potential far beyond any conceivable threat to their country.

This is exactly why we have balanced our Air Force program as we have: to meet the growing threat at any level of conflict. We have been prudent in our proposals and have made great progress in assuring that we make the best possible use of our acquisition dollars.

The second issue I would like to highlight is the quality and dedication of our Air Force people. During my nearly 5 years as Under Secretary of the Air Force, I visited numerous Air Force bases around the world and met hundreds of Air Force blue suiters.

I am enormously impressed with the these people, their skills, their training and dedication. Without question, the greatest strength of our Air Force lies in the high quality of our people.

In our Air Force enlisted ranks almost all are high school graduates and just about half have 20 or more semester hours of college. These are just the kind of people we need to maintain and repair our weapon systems as we incorporate advanced technology in our new aircraft.

Our officer corps is equally impressive. Almost half of all of our officers from second lieutenant through four-star generals have graduate degrees. Most were earned on their own time.

Among the general officers the degree holders are even higher. Almost 85 percent hold masters or doctorate degrees.

Such quality of our people means enhanced performance in every mission area. I have no doubt that the quality of our people was a key factor in the Air Force's best-ever flying and ground safety records last year.

We have been able to attract and retain such high quality people because of our support for personnel and quality of life programs. We cannot afford to lose any of these highly skilled, highly motivated and dedicated people. It would be very expensive to do so.

Though our retention trends do not yet indicate a problem, our people see their promotions, their pay, and their retirement threatened. We are watching our retention very carefully to detect any trends in that direction.

The third and last issue I would like to address is our acquisition programs.

First, let me say we fully support the President and Secretary Weinberger in implementing the Packard Commission's recommendation on improving the acquisition process. We are extremely sensitive to the requirement that we be better and more effective stewards of our portion of the taxpayers' dollar and are always looking for better ways to do business.

Nevertheless, let me emphasize while our record is not perfect, instances of fraud, abuse, overpricing and poor product reliability are few when you think of the magnitude of Air Force procurement, more than 870,000 kinds of items in our supply system alone.

We have been attacking procurement deficiencies in a number of areas. One of our most powerful tools is the natural forces of a competitive market. The Air Force has been very successful in increasing the number of competitive contracts and in developing dual sources for weapons systems and supplies.

This effort has produced positive results such as the $4 billion in savings we now expect from our alternate fighter engine program. We are breaking out spare parts from the weapon systems we procure from our prime contractors so that we can buy spares directly from the manufacturer or through open competition.

The results have been a savings of 40 percent over the cost of buying through the prime contractor. Less than 13 percent of our procurement dollars have been awarded sole source without the benefit of competition and we are going to drive that number down.

In addition, the Air Force has successfully used the concept of multiyear contracts for weapons systems like the F-16, B-1B and KC-10. To date this has saved the American taxpayer more than $3 billion. On the B-1B contract alone we expect to save $160 million on spares as a result of the basic multiyear contract.

The Air Force was the first to recognize that we had spare parts and equipment pricing problems and we were the first to develop a very aggressive program to fix them. We have worked hard to identify the root causes of the problem and we have more than 300 actions in process to eliminate them. We have target prices for tens of thousands of parts.

We have also implemented special incentive programs such as Zero Overpricing to encourage Air Force people, military and civilian, to challenge the price of the parts we buy and vigorously pursue refunds from contractors suspected of overcharging the Air Force.

Our record of suspensions and prosecution since 1980 indicates we will not tolerate fraud or illegal contracting practices. While we will continue increased vigilance, the key to reductions in cost of supporting our forces lies in our future planning and design.

As we purchase new weapon systems, we are committed to placing reliability and maintainability on an equal footing with performance, cost, and schedule.

In addition to cost benefits, emphasizing reliability and maintainability greatly enhances readiness and sustainability in combat. The Air Force is demanding improved reliability and maintainability from defense contractors and rewarding them for following through.

A perfect example of our efforts is in the advanced tactical fighter. As a result of our emphasis on reliability and maintainability, we anticipate the sustained sortie generation rate of the ATF will be at least twice that of the F-15 and require fewer maintenance personnel and less support equipment.

We cannot afford to allocate a larger share of our budget and manpower to maintain our systems. In short, there is a new cost awareness in the Air Force today. We care about every dollar we spend and will continue to look for better ways to acquire and maintain our assets for the American taxpayer.

Let me conclude by stating fiscal year 1987 will be a very challenging year for the Air Force in space operations. We are attempting to recover from the tragedy of the *Challenger* loss. As a result of that accident, our space launch posture is seriously reduced, and there is nothing we can do to change that for the next 2 years.

Thanks to the congressional support for our expendable launch vehicle program and Titan II space launch vehicle, they come on line in 1988. However, those now programmed are committed to specific payloads. We must act now to expand the launch capacity to help fly off the backlog of missions.

Ultimately we will need congressional support to develop a balanced space launch capability more robust than before. Frankly, we do not want to find ourselves in this situation again.

Fiscal restraint has required us to make tough decisions. The most recent decision to end the T-46 Program was driven primarily by the fiscal constraints applied to our mission priorities. We believe, however, the balanced approach we have developed will continue the essential expansion and modernization of our forces.

We face critical milestones of all force elements, strategic, mobility, tactical, and space. Perhaps more importantly we must not renege on our promises to our people, who make it all work and who are our most valuable resources.

Thank you, Mr. Chairman. I will proceed any way you like.

[The prepared statement of Mr. Aldridge follows:]

PREPARED JOINT STATEMENT OF HON. EDWARD C. ALDRIDGE, JR., ACTING SECRETARY OF THE AIR FORCE AND GEN. CHARLES A. GABRIEL, CHIEF OF STAFF, U.S. AIR FORCE

MR. CHAIRMAN AND MEMBERS OF THE COMMITTEE:

The preservation of peace, freedom and independence is America's most fundamental national security objective. In order to ensure this objective is met, and to protect the vital interests of our allies and friends, the Air Force has prudently balanced its forces and capabilities to deter aggression across the spectrum of conflict. Our program to redress serious shortfalls in force structure, weaponry, readiness and sustainability that contribute to deterrence has been successful over the past five years. Our FY 87 budget request will continue to improve these capabilities. Maintaining this momentum is important, since it is the only way to meet effectively the growing threats to our nation's security.

Our progress over the past five years has included significant improvements in a number of vital areas. In terms of strategic modernization, the continued deployment of cruise missiles, improvements in Minuteman III accuracy, and upgraded B-52 avionics have improved greatly our capacity to deal with the threat. Later in 1986, we will achieve initial operational capability of the B-1B and the Peacekeeper missile. The enhanced capability of the B-1B to penetrate Soviet airspace and the prompt hard-target kill of Peacekeeper will put us in a much stronger position to deter Soviet aggression.

Improvements haven't been limited to the strategic arena. We have also seen significant increases in the combat capability of our fighters. In the air-to-air role, pilots flying today's airplanes--with improved missiles, spares and support--would expect to kill half again as many attacking fighters as the 1980 force could have. Also, updated AWACS systems can now handle three times as many targets as earlier versions. The air-to-ground picture is even better, with pilots expected to destroy almost two times the number of targets they could have with the 1980 force. For example, improvements in weapon systems accuracy were recently demonstrated in **Gunsmoke '85**, our worldwide tactical bombing and gunnery competition. The winning team's score in **Gunsmoke '81** would only have earned tenth place in our recent competition. Strategic airlift capability has increased through added capacity, modifications, and increased spares. This added capacity is enough to transport an entire airborne division to Europe in the first ten days of a war.

While Congress and the American people have supported our efforts, growing concern over the Federal deficit and recent legislation mandating a balanced budget could limit our progress in the future. Unfortunately, the Soviet Union, unhampered by similar concerns, continues its ambitious buildup of offensive military capability. By most qualitative and quantitative measures, the Soviets are developing a war-making potential far greater than needed for a defensive posture. The magnitude and rate of production of their advanced weapons, the expanding global reach of their forces, and their growing influence in some Third World countries pose a major challenge for the United States today and create a deep concern about the future.

Our military strategy to cope with these threats rests on deterrence. By maintaining a sufficient military capability, we ensure that potential adversaries will face a certainty of loss and an uncertainty of gain that would discourage any decision to take aggressive action. However, capability alone is not sufficient to ensure deterrence. Potential enemies must understand the United States will act decisively should deterrence fail. This is why the Air Force program is structured to provide a capability to meet the threat at any level of conflict.

PRIORITIES

A balanced Air Force program ensures that we, in conjunction with our sister Services, build and maintain the nuclear and conventional capability to respond to any threat to our security. Our FY 87 budget prudently balances expenditures among mission areas so we can operate and sustain today's forces, while investing in future capability needed to meet the changing threat. The effectiveness of our forces depends on getting the most from the resources we have, and our people remain our most critical resource. Without well-trained and highly motivated people to operate and support our weapon systems, improving them would be a hollow effort. Support for people and their quality of life is a central concern--they are the very foundation on which our priorities stand. These priorities are to:

- modernize strategic forces (offensive and defensive)
- Improve readiness and sustainability of general purpose forces
- Increase airlift capability
- Modernize and expand tactical forces

Central to our modernization is the efficient and effective use of space. This nation's heavy civilian and military reliance on space-based systems, coupled with the Soviet's potential to disrupt these systems, demands continued improvement in our ability to operate in space and to deter threats to these vital assets.

OUR PEOPLE

Last year we reported the quality of Air Force people was never better. This assessment still rings true. Nearly every indicator by which we judge quality is up. Our recruits are better educated than ever and are highly motivated to serve. They perform well during their training and initial duty assignments, and the many who choose to stay are highly productive throughout their careers. On an equally positive note, we have fewer disciplinary problems. Air Force members and their families are proud of the job they do and proud of the institution and the country they serve.

Much of the credit for the dramatic turnaround since the late 1970s belongs to Congress for supporting pay increases and improvements in such benefits as travel allowances, family support centers and other "people programs." This support has raised significantly the quality of life for our people and their families. We seek continued support for these programs in FY 87 because they permit us to compete with the private sector for scarce manpower and to recruit some of the best people our country has to offer.

Retention is still slightly above historical averages; however, since FY 87 we have seen an increasing number of skilled, experienced people leave the Air Force, particularly pilots and enlisted personnel serving in high-tech and sortie generating specialties. Some of the factors affecting this trend are an improving economy and fundamental changes in the basic fabric of American life; e.g., working spouses. These factors also must be weighed against the realities of military life--frequent relocations, involuntary family separations, difficult living and working conditions, and risk of personal injury or death. Additionally, the increasing perception among our members is that recent pay caps and mandated change to the retirement system are the "tip of the iceberg." This is why it is so important to continue emphasis on quality of life issues, such as easing the burden of PCS moves and providing dependent dental care.

No single issue is more important to our career force than the declining value of the retirement system. Permanent changes to this most important incentive must be carefully considered if the quality and readiness of our forces are to be maintained at reasonable cost. We intend to address these important "people" issues head-on. The Air Force cannot afford to return to the personnel crisis it faced over five years ago when pay was far from comparable with the civilian sector, benefits were being threatened, and our best people were leaving at an accelerated rate.

The Air Force fully appreciates the federal budget dilemma and is working hard to ensure taxpayers get the most for their defense dollars. In the FY 87 budget, we have taken a particularly hard look at our programmed manpower requirements. We are calling for a small increase in military and civilian manpower, the smallest request since FY 80. Over the course of the Five Year Defense Program (FYDP), growth averages only three-tenths of one percent military and four-tenths of one percent civilian. New programs require associated manpower, but we are working hard to hold future growth to an absolute minimum.

In turn, we urge continued Congressional support for our budget for personnel and quality of life. Such support in recent years has done great good--for morale, retention, and the resultant readiness of the Air Force. We will work with the Congress to avoid any action in pay, retirement, entitlements, or other personnel areas, which might undo that good.

In developing our FY 87 manpower request, we have taken deliberate management action to ensure the most efficient mix and organizational structure. We have used such measures as functional reviews, military-to-civilian conversions, cost comparison studies for contracting our nonmilitary essential positions, and a formal productivity improvement program to identify thousands of manpower spaces needed to offset required growth for force structure improvements. We have paid particular attention to ensure growth is focused on required capability and we are studying our indirect support and overhead management functions to determine the most efficient and effective way to do the job. In FY 86 alone, about 4,100 indirect military support requirements were either realigned to higher priorities or eliminated. In the area of overhead, our headquarters' functions have not been spared. Recently, we accommodated spares acquisition management; the Fraud, Waste, and Abuse Program; and the activation of HQ USCENTCOM, HQ USSPACECOM, and HQ 23rd Air Force (MAC) within limits set in FY 81 by a self-imposed, no-growth policy. The Air Force is making substantial progress in its efforts to respond to congressional concerns and budget realities, while providing the capability required to meet the threat. By FY 91, approximately 620,000 authorizations will be reviewed, and savings will be used to adjust our annual manpower request to Congress.

We need congressional support to avoid nonprogrammatic manpower cuts. Manpower reductions that are not program specific generate a rippling effect that causes inefficiences and program delays. Such reductions do not eliminate the work; they eliminate the people to do it, lowering the morale and welfare of those who are left to do more with less. This degrades mission capability and readiness. The end result will be the loss of the "qualitative edge" we have worked so hard to gain over the last five years.

The qualitative edge we have over the Soviets is due, in no small measure, to the important contributions of the Air National Guard, Air Force Reserve, and Air Force civilians. Total Force is much more than a policy--it is the proven path to meet, effectively and economically, many defense obligations. The Guard and Reserve contribute substantially to our tactical, airlift, and strategic forces. With the transfer of additional forces to the Guard and Reserve, such as the C-141, C-5, and F-16, we will depend on them even more. Finally, our civilian work force offers stability and continuity to our Active and Air Reserve Forces and is vital to our ability to accomplish our mission.

MANAGING RESOURCES

Public attention continues to focus on the defense acquisition process and the price and dependability of the goods procured. The Air Force places great emphasis on being a good steward of the American tax dollar. Our record is not perfect, but instances of abuse, overpricing, and poor product reliability are relatively few in comparison with the magnitude of Air Force procurement tasks. In fact, when the size of our procurement program is considered--we have more than 890,000 kinds of items in our supply system alone--our record is remarkably good.

The Air Force has been an active participant in the Defense Acquisition Improvement Program since it began more than four years ago. We knew that problems existed in our acquisition process and began aggressive actions to reduce inefficiency, eliminate overpricing, and solve reliability problems. Although rarely noted by critics, almost every "horror story" was first discovered and then corrected by our own people prior to being publicized in the media.

One of the most powerful tools we use in attacking procurement inefficiencies is the natural force of the competitive market. We have always encouraged competitive bidding and dual sources for our weapon systems and supplies. Since 1982, this emphasis has increased. The competitive atmosphere has produced positive results, such as the more than $4.0 billion we expect to save in our Alternate Fighter Engine Program. This includes $250 million in additional savings realized from manufacturer initiatives for the 1987 engine procurement. We've added over 1,560 people to Competition Advocate offices and contracting agencies devoted entirely to our goal of reducing costs through increased competition. At the end of FY 85, over 87 percent of our procurement dollars were either competitively priced or follow-on to production programs originally competed. The Air Force has used the concept of multi-year contracts for weapon systems like the F-16, B-1B and KC-10. To date, this has saved the American taxpayer more than $3 billion. A side benefit of this approach is that it helps bring down the price of spare parts. On the B-1B multi-year contract alone, we expect to save $160 million in spares costs.

The Air Force was the first to recognize the spare parts and support equipment pricing problem and has developed a very aggressive program to solve it. We've worked hard to identify the root causes and have more than 300 actions in progress to eliminate them. We've added new people to screen our parts for competition and have developed "target" prices for tens of thousands of parts. Also, we have implemented special incentive programs, such as Zero Overpricing, to encourage Air Force people--military and civilian--to challenge prices of parts we buy and to pursue vigorously refunds from contractors suspected of overcharging. Our record of suspensions, debarments, and prosecutions since 1980 proves that we will not tolerate fraud or illegal contracting practices.

The key to reducing the cost of maintaining and supporting our forces in the future lies not only in vigilance but also in planning and design. We are committed to placing reliability and maintainability (R&M) on an equal footing with performance, cost, and schedule when we buy new weapon systems. This commitment is the cornerstone of the R&M 2000 action plan, which was put into effect on February 1, 1985. The Air Force will demand improved R&M from defense contractors and reward them for following through. Better R&M pays off in the long run and offers great potential for future efficiencies. A vivid example of this is the Advanced Tactical Fighter (ATF) program, where R&M goals have been made as important as performance goals. As a result, we anticipate the sustained sortie generation rate of the ATF will be about twice that of the F-15. Mobility requirements should be cut in half, and fewer maintenance personnel and less support equipment will be required.

ATF may also result in significant savings while enhancing national security as a result of our recently announced agreement with the Navy to examine cross-Service use of our respective advanced fighter aircraft. While the Navy looks at our ATF, we'll study their Advanced Tactical Aircraft (ATA) for potential in meeting future operational requirements. Because of different missions, there are different design concepts. However, we are pursuing joint technologies that can be used in both aircraft, and we aim to identify design and system changes necessary to develop an ATA variant for future USAF interdiction roles.

In short, there's a strong sense of cost awareness in the Air Force today. We care about every dollar we spend and will continue to look for better ways to acquire, manage, and maintain the assets entrusted to us by the American taxpayer.

We are pleased that the Packard Commission (the President's Blue Ribbon Commission on Defense Management) Interim Report endorsed so much of what has been done to increase the effectiveness and efficiency of our acquisition systems. We look forward to congressional action to implement those Commission recommendations which will further enhance this process.

Fiscal realities require careful development of our programs to ensure both strategic and tactical needs of commanders are met. Prudent allocation of scarce resources also requires the proper balance between present and future needs.

To ensure an efficient warfighting capability, we have taken the lead in improving joint capabilities through increased joint training and Service interoperability. Agreements among the Air Force, Army, and Navy are improving this nation's warfighting capabilities and are ensuring necessary system development without duplication of effort. By coordinating Service efforts, national security is strengthened, and we maximize the return on defense dollars.

STRATEGIC MODERNIZATION

Of all the threats to our national security, none is so clear or so potentially devastating as the threat of nuclear war. Consequently, the strategy and forces necessary to deter such a conflict have been, and will remain, preeminent in our military structure.

During the decade of the 1970s, restraint and negotiations characterized US strategic efforts. The Soviets, however, continued to expand rapidly the quality and quantity of their strategic forces. Under the President's Strategic Modernization Program announced in late 1981, we have been reversing the dangerous trend developing in relative strategic force effectiveness and flexibility. In March 1983, we took on the added goal of work on strategic defense technologies, with an ultimate objective of a transition to a policy based on defense.

Upgrading command, control and communications (C^3) systems is the highest priority of our Strategic Modernization Program. All of our strategic offensive and defensive programs are being linked by more survivable and enduring C^3 systems. We are improving our ability to alert and activate our nuclear retaliatory forces by continued development of the Ground Wave Emergency Network (GWEN) and the Milstar satellite system, as well as modernization of the command centers they serve.

As the President's Commission on Strategic Forces (Scowcroft) concluded, in order "to pursue successfully a policy of deterrence and verifiable, stabilizing arms control, we must have a strong and militarily effective nuclear deterrent. Consequently, our strategic forces must be modernized." With congressional support and the commitment of the American people, strategic modernization of our two legs of the Triad, land-based ICBMs and manned bombers, has produced significant results.

We have made great strides in improving our strategic ICBM capabilities. The 1986 Defense Authorization Bill approved deployment of 50 Peacekeeper missiles in existing Minuteman silos. The Air Force is investigating additional deployment options for the second 50 missiles. Our commitment to this program remains strong and continues to send the correct message to the Soviets regarding our strategic will and resolve. The Peacekeeper test program has completed 11 launches successfully, underscoring the validity of this system to maintain the viability of the land-based ICBM force as a deterrent into the next century.

While Peacekeeper enhances deterrence by adding prompt, highly accurate weapons to our strategic forces, the small ICBM (SICBM), with its single warhead design, supports stability objectives by decreasing individual target value and by increasing the survivability of our land-based missile leg of the Triad. The SICBM's light weight makes it compatible with a broad range of more survivable basing modes, particularly mobile options. We are continuing evaluation of several technologies for SICBM, with potential application to Peacekeeper follow-on deployments, in response to congressional taskings. However, mobility has the advantage of confounding attempts to attack simultaneously all parts of our strategic forces by creating uncertainty in the minds of the Soviets that they could successfully meet war aims without fear of a quick, effective counterattack.

Modernization of the manned bomber leg of the Triad is also proceeding well. The manned bomber is the most flexible element of our strategic forces. With increased Soviet emphasis on mobile ICBM delivery systems and command centers, the manned bomber's potential for real-time location and destruction of such systems is vital to deterrence. It provides a capability across the spectrum of conflict, to include worldwide conventional force projection.

The 100 funded B-1Bs will begin picking up the penetration role from the older B-52s later this year, and research and development continues on the new, long-range, advanced technology bomber that will incorporate low observable technology. This advanced bomber will take over as our primary penetrator in the mid-1990s when Soviet air defenses become more sophisticated. This achievement--ahead of original schedule and below projected cost--resulted in large part from congressional support of the Air Force's commitment to a full program, including multi-year procurement.

The accelerating improvement in Soviet air defenses requires continued efforts to enhance the flexibility and effectiveness of our manned bombers. We are dedicating significant effort to improve our air-launched cruise missiles so they will be better able to avoid detection while penetrating Soviet defenses. the Advanced Cruise Missile (ACM), which will incorporate low observable technology, is on track and will fill this need. Also, we must begin replacing our aging SRAM missiles with SRAM II. These missiles will provide an essential element in the safety, effectiveness, and flexibility of our manned bombers. Finally, to support multi-Service, worldwide needs, the B-52 is being modified to provide the capability to support a full range of conventional options, to include standoff land attack and maritime operations.

Strategic defense is being improved by modernizing our continental air defense forces and upgrading both our ballistic missile and atmospheric warning systems to provide the National Command Authorities (NCA) with better attack warning and attack assessment information.

We are also pursuing, in consonance with the President's Strategic Defense Initiative, research efforts that could provide a comprehensive strategic defense if a decision is made to develop a capability in the future. Continued emphasis on the President's Strategic Modernization Program and on the development of defense technologies is key to equitable and verifiable arms control initiatives that seek to reduce nuclear arms, provide a credible deterrent, and promote a stable and peaceful world. Successful arms reduction depends on our ability to negotiate from a position of strength, a position we can maintain only by modernizing the Triad and by vigorously developing defense technologies. We are pleased the Soviets have come forward with several new arms control initiatives; however, they should recognize the United States will not be lulled into complacency. Negotiating from a position of strength and ensuring we have the means for essential verification form the basis of any meaningful arms negotiations.

READINESS AND SUSTAINABILITY

Successful execution of our strategy requires sufficient, modern, combat-ready forces to win the initial battle, as well as adequate resources to sustain those forces for the remainder of the war. Since 1980, improvements in readiness and sustainability have significantly contributed to our increased combat capability. The flying time for the tactical air forces has increased by 36 percent. We have realized an 83 percent increase in our ability to support fighter wartime sortie generation, due primarily to an increased number of spare parts. Our peacetime spares funding has increased by over 200 percent, and the mission capable rate of our aircraft is up 12 percent across all mission areas. In our newest fighters, the F-15 and F-16, we have reached 80 percent mission capable rates.

By spending more on realistic training, we increased fighter exercise participation by 93 percent and C-130 intratheater airlift exercise participation by 51 percent. The dividend paid on these investments in training and support can easily be seen in the results of our combat crew competitions and, most impressively, by a steadily declining accident rate. The 1985 rate of 1.49 mishaps per 100,000 flying hours is a new record.

In short, our force today is more modern, more capable and maintained at a higher level of readiness and sustainability than in 1980. Our FY 87 funds are programmed to maintain a balance among readiness, sustainability, force structure, and modernization to ensure we get the most combat capability from our resources.

FORCE PROJECTION

To defend American interests worldwide, we must be able to deploy our combat forces rapidly to wherever those interests may be threatened. No matter how good our equipment or how realistic our training, our combat forces have little deterrent or warfighting value if they can't get where they are needed in time.

Thanks primarily to aircraft modifications and increased stocks of spares during the last five years, our airlift force can now deploy about 25 percent more combat power. Our FY 87 funding request will complete the buy of 50 C-5Bs, 60 KC-10s and the cargo-convertible features of the Civil Reserve Air Fleet. By the end of the decade, we will have almost twice the intertheater airlift capability we had in 1980. This is a vast improvement, but still significantly less than is needed.

The C-17 is the heart of our future force projection capability. This aircraft will greatly increase our strategic lift capacity and substantially reduce intratheater movement demands, while saving more than $16 billion and 15,000 people over other airlift alternatives. The C-17 will modernize the intertheater force and provide additional intratheater capability to complement our C-130s. For the first time, we will be able to combine the long-range intertheater aircraft with the ability to routinely deliver the full range of Army equipment directly where it's needed--even into small, austere airfields inaccessible to our current long-range airlift force. In addition to providing unique operational capability, the C-17 will require about one-third of the maintenance manhours per flying hour as the C-5A. FY 87 funds requested for C-17 development are crucial to the timely fielding of this essential mobility asset.

We must also continue to increase our air refueling capability. Air refueling requirements are growing for all our strategic and conventional forces. New CFM56 engines and additional improvements on the KC-135s provide a 50 percent increase in capability at a fraction of the cost of new aircraft.

One of our nation's most difficult challenges is how to deal with conflicts occurring below the threshold of theater warfare, such as regional conflict, insurgency, and terrorism. Low Intensity Conflict (LIC) is a broad term used to characterize such conflict, and the center we've just established with the Army at Langley Air Force Base is a big step in meeting this challenge. The Center will examine Low Intensity Conflict in an integrated way, focus on what has to be done and look into how we can make the best use of the resources we have, including those capabilities designed specifically for special operations. The Center is also the focal point to plan and program for the integration of future forces.

THEATER FORCES

Since the 1960s, the Soviets have steadily expanded their global influence. The USSR is accomplishing this expansion while continuing to out-produce the United States and its allies in virtually every category of weaponry. Our qualitative edge is being steadily eroded by the fielding of technologically advanced systems. To meet this threat, the Air Force is placing high priority on the modernization and expansion of its theater forces.

Three programs are essential to ensuring our forces are capable of meeting the threat of the 1990s: the Advanced Medium Range Air-to-Air Missile (AMRAAM), the Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN), and the Advanced Tactical Fighter (ATF). The intense interest in the AMRAAM program is matched only by its importance to the air battles of the future. It will give your fighters the combat employment range, power, and improved survivability needed to win air battles against a numerically superior foe. AMRAAM will double the effectiveness of the F-15, equipped with AIM-7, and will make the F-16 six times more effective than currently with AIM-9. AMRAAM is a technological success, and earlier this year, Secretary Weinberger certified AMRAAM for continued development within congressional guidelines. LANTIRN will provide badly needed improvements in the air-to-surface role. Our ability to attack effectively targets at night and in poor weather is the key to denying the enemy his objectives. LANTIRN provides this capability across the spectrum of theater conflict. The restructured program is on track and meeting or exceeding our expectations. In the longer term, the Advanced Tactical Fighter (ATF) will be the key to gaining air superiority against a rapidly modernizing and numerically superior Soviet air threat. Soviet advances will have equaled our present capability by the mid-1990s. The ATF is the next step in the evolution of our air superiority capability, and only an aggressive and timely development program will allow us to keep our advantage.

We will capitalize on our advantages in technology, tactics, and dedicated, well-trained people to maintain combat-ready, flexible theater forces. Today, these forces are second to none, but the growth in Soviet military power, and the steady improvement in their combat capabilities, demand that we continue to modernize and expand our tactical air forces while maintaining the sharp edge of readiness.

SPACE

US national security interests are heavily dependent on space-based systems, and this dependence is growing. Space systems support the strategic and conventional forces of all US

Services worldwide by providing vital communications links, weather information, surveillance and warning, and navigational support.

To meet the challenges of our growing dependence on space, we activated the Air Force Space Command (AFSPACECOM) in September 1982. AFSPACECOM has significantly improved our ability to support and control our space assets and associated ground-based elements. In September 1985, US military space assets were formally integrated into the unified command structure with the establishment of the US Space Command. This new command exercises direct operational control of US military space systems, plans for their joint wartime use, and is the focal point for identifying military requirements in space. This arrangement recognizes the fact that space forces, like land, sea and air forces, are best employed under the control of a single commander.

The Air Force is charged with organizing, training and equipping forces to defend US space assets and denying the use of space for purposes harmful to the United States. To do this, we are developing operational capabilities to assure free access to space by the United States and its allies while neutralizing any space-based threat to our interests. Air Force objectives in space include pursuing a vigorous research and development program to give the United States future options in space, moving to space those functions best accomplished there, and developing an effective antisatellite system to deter Soviet attacks against our satellites in orbit.

We're emphasizing programs to make US space systems--the satellites, the ground stations and the communications links between them--more capable and survivable in hostile environments. We recently began operational testing of the Space Shuttle launch facility at Vandenberg AFB, California. The Space Shuttle Challenger accident has had an obvious effect on our space plans, in particular postponing the planned first launch from Vandenberg, an event we'd scheduled for July. We are working closely with the National Aeronautics and Space Administration to identify and correct any and all problems standing in the way of restoration of the Space Shuttle to full operations. At the same time, we're carefully evaluating our launch requirements against projected access to the Space Shuttle and the complementary expendable launch vehicle (CELV) we've been developing. We have identified a need to procure additional CELV's, to provide the assured access to space called for by the President's space policy. This plan can also be accomplished economically with early commitment to multi-year procurement of the CELV's. The Space Shuttle remains an important part of DoD's access to space; however, a combined fleet of CELV's and Shuttles will preserve the unique aspects of the manned spaceflight program while building a stronger, more balanced space launch capability that is largely independent of failures in a given system.

INSTALLATIONS

Even with the most up-to-date weapon systems, our combat capability suffers if our base facilities are outdated and need repair. In fact, the need for renovation, repairs, and replacement is continual and cannot be deferred. This year our Military Construction Program amounts to $2 billion and our Military Family Housing program comes to $.9 billion.

A high priority in this worldwide program is construction of adequate support facilities and housing at our Ground-Launched Cruise Missile (GLCM) main operating bases in Europe. Without facilities to support accompanied tours, poor retention and low experience levels will become chronic problems in this critical deterrent program. In the long run, unaccompanied tours cost more due to lower personnel retention and the fact that we have to incur higher costs for training, temporary duty and permanent change of station.

In FY 87 we are requesting $61.7 million for all GLCM bases, the bulk of which is earmarked for Molesworth, United Kingdom; Woensdrecht, Netherlands; and Florennes, Belgium. These funds are required for permanent construction to replace interim facilities. Additionally, $9.4 million of housing funds is requested for family housing in Belgium and Germany to support GLCM accompanied tours.

We're also dedicating considerable effort to improving the environment at our installations. The Model Installation Program has demonstrated that commanders can and will operate their bases more efficiently when given more authority over day-to-day business. In the two years of its existence, the program has highlighted the considerable opportunities for innovation within existing Air Force guidelines and pointed the way to specific steps for making our bases excellent installations, both in mission performance and as places for our people to live and work. The program has produced a broad range of ideas which have reduced requirements, allowing us to reallocate resources at the pilot installations. MIP has helped us do more with less.

The Air Force Installation Restoration Program (IRP) is a four-phase effort to identify the locations and contents of past toxic or hazardous waste sites on currently or formerly owned/used property and to eliminate the hazards in an environmentally responsible manner. Federal law (Superfund) requires this cleanup by private industry and federal agencies. The Air force is requesting $131 million in FY 87 to continue our cleanup efforts. This amount would allow us to have a responsive and effective IRP.

SUMMARY

Without doubt, 1987 will be the most challenging year of our force modernization program. We believe the balanced approach we have selected will provide the essential combat capability to counter the threat. We face critical milestones in all force elements: strategic, mobility, tactical and space. Perhaps most importantly, we must not renege on our promises to the people who make it all work and who are our most valuable resources. With congressional support we will continue to increase the security of the American people and ensure a favorable global balance within the bounds of fiscal responsibility.

Senator **Thurmond**. Thank you very much.
General Gabriel.

STATEMENT OF GEN. CHARLES A. GABRIEL, CHIEF OF STAFF, U.S. AIR FORCE

General **Gabriel**. Thank you, Mr. Chairman, and thanks for those words on my departure after 4 years working with your committee. I appreciate very much what you have done to help us build the deterrence that we have today.

It is a real pleasure to represent the men and women of the U.S. Air Force. These men and women are very proud to serve their country and they are proud to be in the greatest, most powerful air force in the world. We are all very grateful to you for your support and the support of the American people. You put us in this position where we do have, I think, a very fine deterrence today.

What I would like to do is give a few short remarks, and expand a bit on what the Secretary said, but mostly to talk about some capability improvements we have made over the last few years.

First, in the strategic modernization areas we have made good progress. You mentioned the progress we made in our two legs of the triad, bombers and ICBM's. We have added the air launched cruise missile [ALCM] to the B-52 and improved its reliability, maintainability, and accuracy.

So, today bombers and cruise missiles are 90-percent better in their capability to get a kill against the most hardened control bunkers on the other side.

Senator **Thurmond**. Excuse me, just a minute. I have an emergency. I have to leave. I will ask Senator Warner to take over.

Senator **Warner** [presiding]. Continue, please.

General **Gabriel**. The same thing with the Minuteman III, the modification we have made to improve its maintainability, also improve its accuracy by about 50 percent. So, we are 80-percent better in our targeting against the hardest silos, the SS-18.

Later this year, as the chairman mentioned, we are going to see the B-1B come in, and the Peacekeepers will come in. That will, of course, improve our deterrence a great deal.

Ahead of that is a small ICBM with a single warhead for reduced target value. That will give us more survivability in our basing mode and a great deal more uncertainty in the minds of the Soviets, that is, deterrence in the minds of the Soviets.

For the nineties we are talking about the ATB and advanced cruise missile. Those capabilities will give us more flexibility and targeting improvement.

The tactical fighter improvements are most significant and I will just mention a few. The air-to-air target kill capability today is half again as good as it was 5 years ago. The air-to-ground improvement is even better than that.

As some examples of accuracy, let me talk about the fighter gunnery meet we had at Nellis last fall, Gunsmoke 1985. The team that won that in 1981 would have come in a poor 10th in this meet. Scores are improving that much primarily because of the F-16. The winning team was a Reserve F-16 unit from Hill Air Force Base in Utah.

As to the scores, the second place team came in two points behind, out of 10,000 points. This was an F-16 outfit from Hahn, Germany.

To mention just one event, in the 200-foot level bombing, that is fast and low against a tank, the winning crew put five out of six bombs on the turret of a tank, which is about the size of a manhole cover. It is getting pretty hard to measure it any closer, they are so accurate.

On modernization in our tactical forces to meet the threat of the nineties, there are three major programs I would like to mention, AMRAAM, LANTIRN, and ATF.

I think you all know the advanced medium-range air-to-air missile—AMRAAM. That will be one of the greatest capability improvements we have had in many years in the tactical forces. That is the No. 1 tactical program.

Of course, you know the Secretary of Defense has certified it. It is a technological success. We have had six attempts and six successful shots. We think that is on track, and most important, it will improve the capability of the F-15. It will double the F-15's capability over what it has with the AIM-7. But it will make the F-16 six times more effective because it adds a good radar missile to the F-16; it does not have one right now.

The LANTIRN—low altitude navigation and targeting infrared system for night—will allow our F-16's and F-15E's to do the kind of thing you saw us do over Tripoli Monday night. It opens up the nighttime window, low level, and fast, and it does work. I have flown the F-16 with the LANTIRN. I never thought you would be able to fly low level at night without terrain following, but it can be done and done very well.

The ATF—the advanced tactical fighter—is for the long term. That is to handle the Soviet fleet of the Fulcrum's, Flanker's and Foxhound's in the nineties. We need that, and by the time we get it, it will have been 20 years since we built our last air superiority fighter—the F-15. That is stretching things. Though our technology is better than the other side's, it is stretching it to take that long to build a new fighter. As the Secretary just said, reliability and maintainability will be the No. 1 consideration.

Normally, we say cost, schedule, and performance are the main considerations in acquiring new systems. We have added a fourth leg to the acquisition stool, reliability and maintainability [R&M]. In the case of the ATF, R&M will be first.

In strategic airlift, we've seen a 25-percent improvement in the last 5 years with modifications, spares, and additional capability. We will buy out the 50 C-5E's and 60 KC-10's in the 1987 budget.

This year, fiscal year 1986, we will buy out the Civil Reserve Air Fleet [CRAF] wide bodies. We are getting 19 of them from the airlines. By the end of the decade we will have nearly twice as much lift capability as we had coming into it.

The C-17 is the aircraft of the future. It is the only one that will get us to the 65 million ton-miles per day intertheater goal. It is good in both intertheater and intratheater. It will save us 15,000 people—manpower—and $16 billion in life-cycle cost over the C-5/C-130 alternative.

In addition to these programs, I would like to mention our interservice cooperation. I think you know that Gen. John Wickham, Chief of Staff of the Army, and I got together on 31 initiatives where we could improve cooperation with each other. We have completed 20 of those and just 3 of them alone have saved over $1 billion in cost avoidance.

We have added four more initiatives to that. The last one added has been the Center for Low Intensity Conflict. The center is at the Tactical Air Command at Langley—close to the Army Training and Doctrine Command [TRADOC]. They are looking into an area of warfare that we need to look at badly because low-intensity conflict is certainly what we are going to be involved in mostly, I am afraid.

In terms of Special Operations Forces [SOF] improvement, SOF has our highest priority for spares. I think you know about the rampup we have in the COMBAT TALON, AC-130 gunships, and PAVE LOW HH-53's. We are buying a total of 21 MC-130's. We are going to buy 12 more C-130H's and make those into gunships to replace the old birds that the Air Force Reserve is flying; 12 more of those and 12 more PAVE LOW's. We are going to build these HH-53's up to the PAVE LOW III configuration. I think we are doing very well on the SOF Programs.

In readiness and sustainability—increased combat capability—we have 36 percent more flying time and 83 percent more tactical combat sorties available for combat. Mainly, we have more realistic training and more proficient crews. The crews know they can do their jobs and they have just shown it in the most recent action in Libya. But the big dividend is the declining accident rate, a decline over 5 years, the lowest in history this past year.

Taking just the 1980 rate and projecting it out to compare with what they had this year, we would have lost 110 more aircraft over those years, about a wing and a half of aircraft worth $1.6 billion in replacement costs. Those are the kinds of money you save, not to mention the valuable crews you save, when you avoid accidents.

The key to everything we do today still has to be balance. You know that better than I do. Today's readiness and sustainability must be balanced against tomorrow's force structure and strategic modernization must be balanced with conventional improvements.

We also have to consider the mix of the Active Forces and Air Reserve Forces, Guard and Reserve. On that you need to know that the Reserve Forces are flying our firstline aircraft—everything except the bombers which we do not think is the best mission for them. They are increasing at as fast a rate as they say they can possibly increase and are taking on the missions we give them, both nonflying and flying.

I mentioned the Hill Reserve outfit at Gunsmoke last year. In addition to that, there was an A-7 pilot from Sioux City that won the strafing competition. He got 97 percent holes in the target. That is the first time the A-10's have lost that competition.

The Georgia C-130 Reserve unit won the Volant Rodeo, the tactical airlift contest, and it was a Guard unit from Idaho, the RF-4's, that won the tactical reconnaissance competition.

Our Reserve and Guard Forces are all good, we love them, we are a solid team. It is not just blowing smoke. We do say the Total Force is a way of life.

Just like the Secretary said, our most important resources are our people. We know that. They make things happen. Without well-trained, motivated operators, maintainers, and support people, all this new hardware we are putting out in the field would not be put to full and best use. You have to realize their full potential and keep them trained, keep quality people in the Force. And we are going to continue to emphasize, as the chairman mentioned in his introductory statement, the quality of life—our people programs—we are going to meet our commitment to the men and women who make the Air Force work.

We need your support to do that and to get the most capability we can out of the investment that the American people have made to build the deterrence we have today.

Thank you, Mr. Chairman.

[The accompanying document "U.S. Air Force, Fiscal Year 1986, Report to the Congress of the United States of America," follows:]

Joint Prepared Statement of Hon. Edward C. Aldridge, Jr., Acting Secretary of the Air Force and. Gen. Charles A. Gabriel, Chief of Staff, U.S. Air Force

USAF
FY87

REPORT

to the
99th CONGRESS
of the
UNITED STATES
of AMERICA

EXECUTIVE SUMMARY

The preservation of peace, freedom and independence is America's most fundamental national security objective. In order to ensure this objective is met, and to protect the vital interests of our allies and friends, the Air Force has prudently balanced its forces and capabilities to deter aggression across the spectrum of conflict. Our program to redress serious shortfalls in force structure, weaponry, readiness and sustainability that contribute to deterrence has been successful over the past five years. Our FY 87 budget request will continue to improve these capabilities. Maintaining this momentum is important, since it is the only way to meet effectively the growing threats to our nation's security.

Our progress over the past five years has included significant improvements in a number of vital areas. In terms of strategic modernization, the continued deployment of cruise missiles, improvements in Minuteman III accuracy, and upgraded B-52 avionics have improved greatly our capacity to deal with the threat. Later in 1986, we will achieve initial operational capability of the B-1B and the Peacekeeper missile. The enhanced capability of the B-1B to penetrate Soviet airspace and the prompt hard-target kill of Peacekeeper will put us in a much stronger position to deter Soviet aggression.

Improvements haven't been limited to the strategic arena. We have also seen significant increases in the combat capability of our fighters. In the air-to-air role, pilots flying today's airplanes--with improved missiles, spares and support--would expect to kill half again as many attacking fighters as the 1980 force could have. Also, updated AWACS systems can now handle three times as many targets as earlier versions. The air-to-ground picture is even better, with pilots expected to destroy almost two times the number of targets they could have with the 1980 force. For example, improvements in weapon systems accuracy were recently demonstrated in Gunsmoke '85, our world-wide tactical bombing and gunnery competition. The winning team's score in Gunsmoke '81 would only have earned tenth place in our recent competition. Strategic airlift capability has increased through added capacity, modifications, and increased spares. This added capacity is enough to transport an entire airborne division to Europe in the first ten days of a war.

While Congress and the American people have been supportive of our efforts, growing concern over the Federal deficit and recent legislation mandating a balanced budget could limit our progress in the future. Unfortunately, the Soviet Union is sustaining an ambitious buildup of offensive military capability. By most qualitative and quantitative measures, the Soviets are developing a war-making potential far greater than needed for a defensive posture. The magnitude and rate of production of their advanced weapons, the expanding global reach of their forces, and their growing influence in some Third World countries pose a major challenge for the US today and create a deep concern about the future.

Our military strategy to cope with these threats rests on deterrence. By maintaining a sufficient military capability, we ensure that potential adversaries will face a certainty of loss and an uncertainty of gain that would discourage any decision to take aggressive action. However, capability alone is not sufficient to ensure deterrence. Potential enemies must understand the US will act decisively should deterrence fail. This is why the Air Force program is structured to provide a capability to meet the threat at any level of conflict.

PRIORITIES

A balanced Air Force program ensures that we, in conjunction with our sister Services, build and maintain the nuclear and conventional capability to respond to any threat to our security. Our FY 87 budget prudently balances expenditures among mission areas so we can operate and sustain today's forces, while investing in future capability needed to meet the changing threat. The effectiveness of our forces depends on getting the most from the resources we have, and our people remain our most critical resource. Without well-trained and highly motivated people to operate and support our weapon systems, improving them would be a hollow effort. Support for people and their quality of life is a central concern—they are the very foundation on which our priorities stand. These priorities are to:

- Modernize strategic forces (offensive and defensive)
- Improve readiness and sustainability of general purpose forces
- Increase airlift capability
- Modernize and expand tactical forces

Central to our modernization is the efficient and effective use of space. This nation's heavy civilian and military reliance on space-based systems, coupled with the Soviet's potential to disrupt these systems, demands continued improvement in our ability to operate in space and to deter threats to these vital assets.

PART I - AIR FORCE RESOURCES

OUR PEOPLE

Last year we reported the quality of Air Force people was never better. This assessment still rings true. Nearly every indicator by which we judge quality is up. Our recruits are better educated than ever and are highly motivated to serve. They perform well during their training and initial duty assignments, and the many who choose to stay are highly productive throughout their careers. On an equally positive note, we have fewer disciplinary problems. Air Force members and their families are proud of the job they do and proud of the institution and the country they serve.

Much of the credit for the dramatic turnaround since the late 1970s belongs to Congress for supporting pay increases and improvements in such benefits as travel allowances, family support centers and other "people programs." This support has raised significantly the quality of life for our people and their families. We seek continued support for these programs in FY 87 because they permit us to compete with the private sector for scarce manpower and to recruit some of the best people our country has to offer.

Retention is still slightly above historical averages; however, since FY 84 we have seen an increasing number of skilled, experienced people leave the Air Force, particularly pilots and enlisted personnel serving in high-tech and sortie generating specialties. Some of the factors effecting this trend are an improving economy and fundamental changes in the basic fabric of American life; e.g., working spouses. These factors also must be weighed against the realities of military life--frequent relocations, involuntary family separations, difficult living and working conditions, and risk of personal injury or death. Additionally, the increasing perception among our members is that ~~recent~~ pay caps and a mandated change to the retirement system are the "tip of the iceberg." This is why it is so important to continue emphasis on quality of life issues, such as easing the burden of PCS moves and providing dependent dental care.

No single issue is more important to our career force than the declining value of the retirement system. Permanent changes to this most important incentive must be carefully considered if the quality and readiness of our forces are to be maintained at reasonable cost. We intend to address these important "people" issues head-on. The Air Force cannot afford to return to the personnel crisis it faced over five years ago when pay was far from comparable with the civilian sector, benefits were being threatened, and our best people were leaving at an accelerated rate.

The Air Force fully appreciates the federal budget dilemma and is working hard to ensure taxpayers get the most for their defense dollars. In the FY 87 budget, we have taken a particularly hard look at our programmed manpower requirements. We are calling for a small increase in military and civilian manpower, the smallest request since FY 80. Over the course of the Five Year Defense Program (FYDP), growth averages only three tenths of one percent military and four tenths of one percent civilian. New programs require associated manpower, but we are working hard to hold future growth to an absolute minimum.

In developing our FY 87 manpower request, we have taken deliberate management action to ensure the most efficient mix and organizational structure. We have used such measures as functional reviews, military-to-civilian conversions, cost comparison studies for contracting out non-military essential positions, and a formal productivity improvement program to identify thousands of manpower spaces needed to offset required growth for force structure improvements. We have paid particular attention to ensure growth is focused on required capability, and we are studying our indirect support and overhead management functions to determine the most efficient and effective way to do the job. In FY 86 alone, about 4,100 indirect military support requirements were either realigned to higher priorities or eliminated. In the area of overhead, our headquarters' functions have not been spared. Recently, we accommodated spares acquisition management; the Fraud, Waste, and Abuse Program; and the activation of HQ USCENTCOM, HQ USSPACECOM, and HQ 23rd Air Force (MAC) within limits set in FY 81 by a self-imposed no-growth policy. The Air Force is making substantial progress in its efforts to respond to congressional concerns and budget realities, while providing the capability required to meet the threat. By FY 91, approximately 620,000 authorizations will be reviewed, and savings will be used to adjust our annual manpower request to Congress.

We need congressional support to avoid nonprogrammatic manpower cuts. Manpower reductions that are not program specific generate a rippling effect that causes inefficiencies and program delays. Such reductions do not eliminate the work; they eliminate the people to do it, lowering the morale and welfare of those who are left to do more with less. This degrades mission capability and readiness. The end result will be the loss of the "qualitative edge" we have worked so hard to gain over the last five years.

The qualitative edge we have over the Soviets is due, in no small measure, to the important contributions of the Air National Guard, Air Force Reserve, and Air Force civilians. Total Force is much more than a policy—it is the proven path to meet, effectively and economically, many defense obligations. The Guard and Reserve contribute substantially to our tactical, airlift, and strategic forces. With the transfer of additional forces to the Guard and Reserve, such as the C-141, C-5, and F-16, we will depend on them even more. Finally, our civilian work force offers stability and continuity to our Active and Air Reserve Forces and is vital to our ability to accomplish our mission.

MANAGING RESOURCES

Public attention continues to focus on the defense acquisition process and the price and dependability of the goods procured. The Air Force places great emphasis on being a good steward of the American tax dollar. Our record is not perfect, but instances of abuse, overpricing, and poor product reliability are relatively few in comparison with the magnitude of Air Force procurement tasks. In fact, when the size of our procurement program is considered—we have more than 890,000 kinds of items in our supply system alone—our record is remarkably good.

The Air Force has been an active participant in the Defense Acquisition Improvement Program since it began more than four years ago. We knew that problems existed in our acquisition process and began aggressive actions to reduce inefficiency, eliminate overpricing, and solve reliability problems. Although rarely noted by critics, almost every "horror story" was first discovered and then corrected by our own people prior to being publicized in the media.

One of the most powerful tools we use in attacking procurement inefficiencies is the natural force of the competitive market. We have always encouraged competitive bidding and dual sources for our weapon systems and supplies. Since 1982, this emphasis has increased. The competitive atmosphere has produced positive results, such as the $2.5 billion we expect to save in our Alternate Fighter Engine Program. We've added over 1,560 people to Competition Advocate offices and contracting agencies devoted entirely to our goal of reducing costs through increased competition. At the end of FY 85, over 87 percent of our procurement dollars were either competitively priced or follow-on to production programs originally competed. The Air Force has used the concept of multi-year contracts for weapon systems like the F-16, B-1B and KC-10. To date, this has saved the American taxpayer more than $3 billion. A side benefit of this approach is that it helps bring down the price of spare parts. On the B-1B multi-year contract alone, we expect to save $160 million in spares costs.

The Air Force was the first to recognize the spare parts and support equipment pricing problem and has developed a very aggressive program to solve it. We've worked hard to identify the root causes and have more than 300 actions in progress to eliminate them. We've added new people to screen our parts for competition and have developed "target" prices for tens of thousands of parts. Also, we have implemented special incentive programs, such as Zero Overpricing, to encourage Air Force people—military and civilian—to challenge prices of parts we buy and to pursue vigorously refunds from contractors suspected of overcharging. Our record of suspensions, debarments, and prosecutions since 1980 proves that we will not tolerate fraud or illegal contracting practices.

The key to reducing the cost of maintaining and supporting our forces in the future lies not only in vigilance but also in planning and design. We are committed to placing reliability and maintainability (R&M) on an equal footing with performance, cost, and schedule when we buy new weapon systems. This commitment is the cornerstone of the R&M 2000 action plan, which was put into effect on February 1, 1985. The Air Force will demand improved R&M from defense contractors and reward them for following through. Better R&M pays off in the long run and offers great potential for future efficiencies. A vivid example of this is the Advanced Tactical Fighter (ATF) program, where R&M goals have been made as important as performance goals. As a result, we anticipate the sustained sortie generation rate of the ATF will be about twice that of the F-15. Mobility requirements should be cut in half, and fewer maintenance personnel and less support equipment will be required.

In short, there's a strong sense of cost awareness in the Air Force today. We care about every dollar we spend and will continue to look for better ways to acquire, manage, and maintain the assets entrusted to us by the American taxpayer.

PART II - FORCES, PROGRAMS AND CAPABILITIES

Fiscal realities require careful development of our programs to ensure both strategic and tactical needs of commanders are met. Prudent allocation of scarce resources also requires the proper balance between present and future needs.

To ensure an efficient warfighting capability, we have taken the lead in improving joint capabilities through increased joint training and Service interoperability. Agreements among the Air Force, Army, and Navy are improving this nation's warfighting capabilities and are ensuring necessary system development without duplication of effort. By coordinating Service efforts, national security is strengthened, and we maximize the return on defense dollars.

STRATEGIC MODERNIZATION

Of all the threats to our national security, none is so clear or so potentially devastating as the threat of nuclear war. Consequently, the strategy and forces necessary to deter such a conflict have been, and will remain, preeminent in our military structure.

During the decade of the 1970s, restraint and negotiations characterized US strategic efforts. The Soviets, however, continued to expand rapidly the quality and quantity of their strategic forces. Under the President's Strategic Modernization Program announced in late 1981, we have been reversing the dangerous trend developing in relative strategic force effectiveness and flexibility. In March 1983, we took on the added goal of work on strategic defense technologies, with an ultimate objective of a transition to a policy based on defense.

As the President's Commission on Strategic Forces (Scowcroft) concluded, in order "to pursue successfully a policy of deterrence and verifiable, stabilizing arms control, we must have a strong and militarily effective nuclear deterrent. Consequently our strategic forces must be modernized." With congressional support and the commitment of the American people, strategic modernization of our two legs of the Triad, land-based ICBMs and manned bombers, has produced significant results.

We have made great strides in improving our strategic ICBM capabilities. The 1986 Defense Authorization Bill approved deployment of 50 Peacekeeper missiles in existing Minuteman silos. The Air Force is investigating additional deployment options for the second 50 missiles. Our commitment to this program remains strong and continues to send the correct message to the Soviets regarding our strategic will and resolve.

While Peacekeeper enhances deterrence by adding prompt, highly accurate weapons to our strategic forces, the small ICBM (SICBM), with its single warhead design, supports stability objectives by decreasing individual target value and by increasing the survivability of our land-based missile leg of the Triad. The SICBM's light weight makes it compatible with a broad range of more survivable basing modes, particularly mobile options. Mobility has the advantage of confounding attempts to attack simultaneously all parts of our strategic forces by creating uncertainty in the minds of the Soviets that they could successfully meet war aims without fear of a quick, effective counterattack.

Modernization of the manned bomber leg of the Triad is also proceeding well. The manned bomber is the most flexible element of our strategic forces. With increased Soviet emphasis on mobile ICBM delivery systems and command centers, the manned bomber's potential for real-time location and destruction of such systems is vital to deterrence. It provides a capability across the spectrum of conflict, to include world-wide conventional force projection.

The 100 funded B-1Bs will begin picking up the penetration role from the older B-52s later this year, and research and development continues on the new, long-range, advanced technology bomber that will incorporate low observable technology. This advanced bomber will take over as our primary penetrator in the mid-1990s when Soviet air defenses become more sophisticated.

The accelerating improvement in Soviet air defenses requires continued efforts to enhance the flexibility and effectiveness of our manned bombers. We are dedicating significant effort to improve our air-launched cruise missiles so they will be better able to avoid detection while penetrating Soviet defenses. The Advanced Cruise Missile (ACM), which will incorporate low observable technology, is on track and will fill this need. Also, we must begin replacing our aging SRAM missiles with SRAM II. These missiles will provide an essential element in the safety, effectiveness, and flexibility of our manned bombers. Finally, to support multi-Service world-wide needs, the B-52 is being modified to provide the capability to support a full range of conventional options to include standoff land attack and maritime operations.

Strategic defense is being improved by modernizing our continental air defense forces and upgrading both our ballistic missile and atmospheric warning systems to provide the National Command Authorities (NCA) with better attack warning and attack assessment information.

Upgrading command, control and communications (C^3) systems is the highest priority of our Strategic Modernization Program. All of our strategic offensive and defensive programs are being linked by more survivable and enduring C^3 systems. We are improving our ability to alert and activate our nuclear retaliatory forces by continued development of the Ground Wave Emergency Network (GWEN) and the Milstar satellite system, as well as modernization of the command centers they serve.

We are also pursuing, in consonance with the President's Strategic Defense Initiative, research efforts that could provide a comprehensive strategic defense if a decision is made to develop a capability in the future. Continued emphasis on the President's Strategic Modernization Program and on the development of defense technologies is key to equitable and verifiable arms control initiatives that seek to reduce nuclear arms, provide a credible deterrent, and promote a stable and peaceful world. Successful arms reduction depends on our ability to negotiate from a position of strength, a position we can maintain only by modernizing the Triad and by vigorously developing defense technologies. We are pleased the Soviets have come forward with several new arms control initiatives; however, they should recognize the United States will not be lulled into complacency. Negotiating from a position of strength and ensuring we have the means for essential verification form the basis of any meaningful arms negotiations.

READINESS AND SUSTAINABILITY

Successful execution of our strategy requires sufficient, modern, combat-ready forces to win the initial battle as well as adequate resources to sustain them for the remainder of the war. Since 1980, improvements in readiness and sustainability have significantly contributed to our increased combat capability. The flying time for the tactical air forces has increased by 36 percent. We have realized an 83 percent increase in our ability to support fighter wartime sortie generation, due primarily to an increased number of spare parts. Our peacetime spares funding has increased by over 200 percent, and the mission capable rate of our aircraft is up 12 percent across all mission areas. In our newest fighters, the F-15 and F-16, we have reached 80 percent mission capable rates.

By spending more on realistic training, we increased fighter exercise participation by 93 percent and C-130 intratheater airlift exercise participation by 51 percent. The dividend paid on these investments in training and support can easily be seen in the results of our combat crew competitions and, most impressively, by a steadily declining accident rate. The 1985 rate of 1.49 mishaps per 100,000 flying hours is a new record.

In short, our force today is more modern, more capable and maintained at a higher level of readiness and sustainability than in 1980. Our FY 87 funds are programmed to maintain a balance among readiness, sustainability, force structure, and modernization to ensure we get the most combat capability from our resources.

FORCE PROJECTION

To defend American interests world-wide, we must be able to deploy our combat forces rapidly to wherever those interests may be threatened. No matter how good our equipment or how realistic our training, our combat forces have little deterrent or warfighting value if they can't get where they are needed in time.

Thanks primarily to aircraft modifications and increased stocks of spares during the last five years, our airlift force can now deploy about 25 percent more combat power. Our FY 87 funding request will complete the buy of 50 C-5Bs, 60 KC-10s and the cargo-convertible features of the Civil Reserve Air Fleet. By the end of the decade, we will have almost twice the intertheater airlift capability we had in 1980. This is a vast improvement, but still significantly less than is needed.

The C-17 is the heart of our future force projection capability. This aircraft will greatly increase our strategic lift capacity and substantially reduce intratheater movement demands, while saving more than $16 billion and 15,000 people over other airlift alternatives. The C-17 will modernize the intertheater force and provide additional intratheater capability to complement our C-130s. For the first time, we will be able to combine the long range intertheater aircraft with the ability to routinely deliver the full range of Army equipment directly where it's needed—even into small, austere airfields inaccessible to our current long-range airlift force. In addition to providing unique operational capability, the C-17 will require about one-third of the maintenance manhours per flying hour as the C-5A. FY 87 funds requested for C-17 development are crucial to the timely fielding of this essential mobility asset.

We must also continue to increase our air refueling capability. Air refueling requirements are growing for all our strategic and conventional forces. New CFM56 engines and additional improvements on the KC-135s provide a 50 percent increase in capability at a fraction of the cost of new aircraft.

One of our nation's most difficult challenges is how to deal with conflicts occurring below the threshold of theater warfare such as regional conflict, insurgency, and terrorism. Low Intensity Conflict (LIC) is a broad term used to characterize such conflict, and the center we've just established with the Army at Langley Air Force Base is a big step in meeting this challenge. The Center will examine Low Intensity Conflict in an integrated way, focus on what has to be done and look into how we can make the best use of the resources we have, including those capabilities designed specifically for special operations. The Center is also the focal point to plan and program for the integration of future forces.

THEATER FORCES

Since the 1960s, the Soviets have steadily expanded their global influence. The USSR is accomplishing this expansion while continuing to out produce the US and its allies in virtually every category of weaponry. Our qualitative edge is being steadily eroded by the fielding of technologically advanced systems. To meet this threat, the Air Force is placing high priority on the modernization and expansion of its theater forces.

Three programs are essential to ensuring our forces are capable of meeting the threat of the 1990s: the Advanced Medium Range Air-to-Air Missile (AMRAAM), the Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN), and the Advanced Tactical Fighter (ATF). The intense interest in the AMRAAM program is matched only by its importance to the air battles of the future. It will give our fighters the combat employment range, power, and improved survivability needed to win air battles against a numerically superior foe. AMRAAM is a technological success, and we are confident the program will be certified within congressional guidelines. LANTIRN will provide badly needed improvements in the air-to-surface role. Our ability to attack effectively targets at night and in poor weather is the key to denying the enemy his objectives. LANTIRN provides this capability across the spectrum of theater conflict. The restructured program is on track and meeting or exceeding our expectations. In the longer term, the Advanced Tactical Fighter (ATF) will be the key to gaining air superiority against a rapidly modernizing and numerically superior Soviet air threat. Soviet advances will have equaled our present capability by the mid-1990s. The ATF is the next step in the evolution of our air superiority capability, and only an aggressive and timely development program will allow us to keep our advantage.

We will capitalize on our advantages in technology, tactics, and dedicated, well-trained people to maintain combat-ready, flexible theater forces. Today, these forces are second to none, but the growth in Soviet military power, and the steady improvement in their combat capabilities, demand that we continue to modernize and expand our tactical air forces while maintaining the sharp edge of readiness.

SPACE

US national security interests are heavily dependent on space-based systems, and this dependence is growing. Space systems support the strategic and conventional forces of all US Services world-wide by providing vital communications links, weather information, surveillance and warning, and navigational support.

To meet the challenges of our growing dependence on space, we activated the Air Force Space Command (AFSPACECOM) in September 1982. AFSPACECOM has significantly improved our ability to support and control our space assets and associated ground-based elements. In September 1985, US military space assets were formally integrated into the unified command structure with the establishment of the US Space Command. This new command exercises direct operational control of US military space systems, plans for their joint wartime use, and is the focal point for identifying military requirements in space. This arrangement recognizes the fact that space forces, like land, sea and air forces, are best employed under the control of a single commander.

The Air Force is charged with organizing, training and equipping forces to defend US space assets and denying the use of space for purposes harmful to the United States. To do this, we are developing operational capabilities to assure free access to space by the United States and its allies while neutralizing any space-based threat to our interests. Air Force objectives in space include pursuing a vigorous research and development program to give the US future options in space, moving to space those functions best accomplished there, and developing an effective antisatellite system to deter Soviet attacks against our satellites in orbit.

We're emphasizing programs to make US space systems—the satellites, the ground stations and the communications links between them—more capable and survivable in hostile environments. We recently opened the Shuttle launch facility at Vandenberg AFB, California. The first military Shuttle mission from this facility had been planned for later this year, but may be delayed in light of the Challenger's accident. At the same time, we're developing a complementary expendable launch vehicle (CELV). The Shuttle will remain DoD's primary launch vehicle, but CELVs will provide a prudent safeguard against unforeseen technical or operational problems with the Shuttle, give additional launch flexibility in crisis situations, and allow us to maintain a space launch industrial base.

INSTALLATIONS

Even with the most up-to-date weapon systems, our combat capability suffers if our base facilities are outdated and need repair. In fact, the need for renovation, repairs and replacement is continual and cannot be deferred. This year, our Military Construction Program amounts to $2 billion and our Military Family Housing program comes to $.9 billion.

A high priority in this world-wide program is construction of adequate support facilities and housing at our Ground-Launched Cruise Missile (GLCM) main operating bases in Europe. Without facilities to support accompanied tours, poor retention and low experience levels will become chronic problems in this critical deterrent program. In the long run, unaccompanied tours cost more due to lower personnel retention and the fact that we have to incur higher costs for training, temporary duty and permanent change of station.

In FY 87 we are requesting $61.7 million for all GLCM bases, the bulk of which is earmarked for Molesworth, United Kingdom; Woensdrecht, Netherlands; and Florennes, Belgium. These funds are required for permanent construction to replace interim facilities. Additionally, $9.4 million of housing funds is requested for family housing in Belgium and Germany to support GLCM accompanied tours.

We are also dedicating considerable effort to improving the environment at our installations. The Air Force Installation Restoration Program (IRP) is a four-phase effort to identify the locations and contents of past toxic or hazardous waste sites on currently or formerly owned/used property and to eliminate the hazards in an environmentally responsible manner. Federal law (Superfund) requires this cleanup by private industry and federal agencies. The Air Force is requesting $131 million in FY 87 to continue our cleanup efforts. This amount would allow us to have a responsive and effective IRP.

SUMMARY

Without doubt, 1987 will be the most challenging year of our force modernization program. We believe the balanced approach we have selected will provide the essential combat capability to counter the threat. We face critical milestones in all force elements: strategic, mobility, tactical and space. Perhaps most importantly, we must not renege on our promises to the people who make it all work and who are our most valuable resource. With congressional support we will continue to increase the security of the American people and ensure a favorable global balance within the bounds of fiscal responsibility.

PART I - AIR FORCE RESOURCES

The basic objective of aerospace forces is to win the aerospace battle—to gain and/or maintain control of the aerospace environment and to take decisive actions immediately and directly against an enemy's warfighting capacity. Our priorities are based on this objective, with the goal of providing a wide range of forces—from special operations to strategic nuclear—to ensure our nation maintains its warfighting strength. We operate two-thirds of the strategic nuclear Triad—manned bombers and land-based ICBMs. Our airlift resources underwrite the combat capability of all military services by delivering forces and support anywhere on the globe. The firepower, flexibility and responsiveness of our tactical forces allow the US to rapidly field combat force to deter a potential adversary from aggressive ambitions.

Our budget prudently balances expenditures among mission areas by operating and sustaining today's force, as well as investing in future capabilities. We've struck a balance between readiness, which has improved significantly in the past few years, and modernizing our forces, to meet the steadily increasing Soviet challenge. In support of the national commitment to reduce deficit spending, we have adjusted and, in some cases, canceled programs to remain within funding guidelines. Success depends on getting the most from the resources we have, and our people remain our most critical resource. Without well-trained and highly motivated people, improving our weapon systems is a hollow effort. Support for our people and their quality of life remains a central concern—they are the foundation on which our priorities stand. These priorities remain to:

- Modernize strategic forces (offensive and defensive)
- Improve readiness and sustainability of general purpose forces
- Increase airlift capability
- Modernize and expand tactical forces

We are also improving our ability to operate in space. The Air Force is charged with organizing, training and equipping forces to defend US space assets and denying the unrestricted use of space for targeting US forces in time of war. The Soviet's potential to disrupt our space operations, which provide vital communication links, weather and intelligence information, surveillance, manning and navigational support, demands continued improvement in our ability to deter threats to these vital capabilities.

THE AIR FORCE BUDGET

The FY 87 Air Force budget request supports our nation's need for capable aerospace deterrent and warfighting forces. The program is a balanced one that will ensure nuclear and conventional capabilities that can successfully address the full range of threats to our security, and to the security of our allies.

Our military strategy to cope with Soviet and Third World threats rests on deterrence. The backbone of deterrence is military capability sufficient to convince potential adversaries that the costs of aggression would far outweigh any possible gains. However, capability alone is not sufficient to secure deterrence. Potential enemies must understand that the US will act decisively should deterrence fail. This is why the Air Force program has been structured to provide capabilities to meet threats at any level of conflict. Our goal for the future is to maintain these capabilities.

Our program continues to place emphasis on modernization of strategic forces, improvement of readiness and sustainability, expansion of airlift capability, modernization and expansion of tactical forces, and improvement of our capabilities in space. We're carrying forward an aggressive total force policy that effectively combines active and reserve components, and we plan to civilianize or contract out non-military essential functions at a prudent pace.

Reduced funding in FY 86, from the FY 84 and 85 growth levels, reflects growing concern with the federal deficit. Although deficit reduction is an important goal, of equal importance is a steady, well-planned program for ensuring our current and future security—a program based on a realistic evaluation of threats to that security.

The present budget environment confronts us with a dilemma. Although threats to our security continue to grow, both in size and complexity, we find we must adjust and cancel programs to remain within shrinking budget projections.

While the Soviets also face economic dilemmas, they do not appear to be slowing the momentum in their force modernization efforts. There are no indications that the Soviet arms buildup will slow if we slow our own defense efforts. History, in fact, has demonstrated just the opposite inclination.

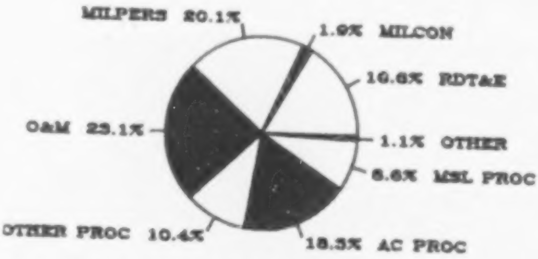
These concerns notwithstanding, our priorities remain quite clear. We must continue an investment program that will meet future threats, while providing sufficient resources to support our existing force structure and approved expansions in that structure. We've conducted intensive reviews to determine an effective mix of the manpower and materiel resources needed to meet our requirements, and we believe our FY 87 program will enable us to maintain today's wartime capability, while continuing to improve our future capabilities.

Budget Review

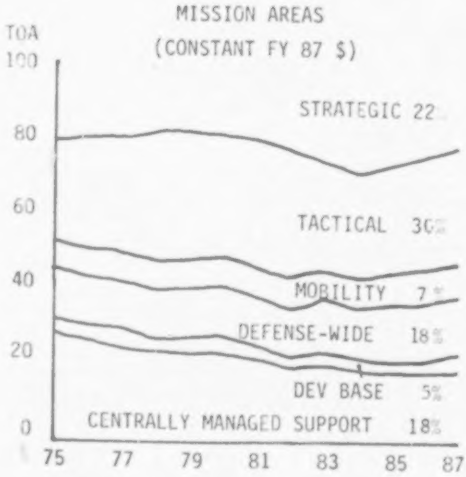
Total Obligational Authority (TOA) of $104.5 billion is needed to execute the FY 87 Air Force Program. Consistent with our priorities, we plan to use these funds to modernize strategic forces, improve combat readiness and sustainability, increase airlift, modernize and expand tactical forces, and improve our capabilities in space.

The accompanying charts illustrate the distribution of FY 87 budget authority by major appropriation and mission area. The FY 87 budget continues improvements in

Air Force capabilities begun by the President in the FY 82 Amended Budget. Negative growth in the Strategic area overall results from buyout of B-1B procurement in FY 86. However, we are making significant improvements in strategic defense and strategic C^3 as evidenced by the positive growth from FY 86-87 (25.8 percent and 24.5 percent respectively). The increases in the Tactical area are the result of an increase in air-to-air and air-to-ground missiles, AMRAAM procurement, JTIDS, JSTARS and RDT&E for the ATF. In spite of significant gains in the Special Operations Forces (SOF) and C-17 programs, the Mobility area exhibits negative growth due to transfers of mobility missions to the Guard and Reserve Forces. Growth in the Development Base area is the result of increases in the number of classified programs.



TOTAL REQUEST = $104.5B



Budget Affordability and the Deficit

Our goal is to acquire needed combat capability at a reasonable cost. Programs are structured and timed to achieve stable, economic production rates and to provide improved combat capability. Consequently, as we restructure our programs to bring them into line with budget realities, several important considerations must be kept in mind.

First, although the approved level of budget authority can be cut, actual near-term expenditure savings for major weapon systems will be modest, since outlays tend to be spread over several years. Therefore, FY 87 money allocated for a major system may be planned to be spent over the next three or more fiscal years. FY 87 savings from reducing these funds would apply only to that small portion of the funds allocated for FY 87 spending.

Second, cuts in defense spending do not lead to one-for-one reductions in the federal deficit. Only a portion of each defense dollar cut actually contributes to deficit reduction, since defense spending creates revenues from corporations and individuals. Because of this linkage, cuts are partially offset by reduced state and federal revenues and increased unemployment compensation payments.

Third, cuts in major procurement programs tend to increase defense costs over the long run. When programs are deferred or stretched out, we buy fewer units each year at a higher cost for each item and, ultimately, have to pay more for a given force level.

Long-term, high priority programs will require even more attention by the Air Force, DoD and the Congress. Programs operating on closely restricted budgets, such as AMRAAM and LANTIRN, will require special emphasis to ensure they are not inadvertently canceled by automatic mechanisms set up to manage the deficits.

OUR PEOPLE

Air Force people, both military and civilian, are the foundation of our warfighting capability and the overarching factor in all Air Force priorities. High quality, well-trained and experienced people are essential to all mission areas and programs. Our efforts to modernize strategic nuclear forces, improve readiness and sustainability, increase airlift resources, modernize the tactical forces and improve our ability to operate effectively in space are giving the Air Force the hardware it needs to perform the mission. However, our people must operate and maintain these systems, and they will ultimately determine the course of battle.

In FY 86, we made significant improvements in quality of life programs. But continued progress is essential if we expect to attract and retain a quality force. We must take care of our people by providing competitive compensation, a strong system of institutional benefits, and an equitable and stable retirement system. We must also intensify our efforts to provide adequate permanent change of station reimbursements and housing for Air Force families world-wide. In return, we will have a trained and motivated combat force capable of meeting our deterrence and warfighting objectives.

Retaining our people, particularly our pilots, will become more difficult this year. During the last fiscal year, we experienced a 13 percentage-point drop in pilot continuation rates and we expect a further moderate decline through FY 86. A similar situation exists within the enlisted force. If this downward trend continues, we will have to recruit and train more and more replacements at ever-increasing costs. Unfortunately, the valuable experience gained from years on the job is not recoverable at any price; we must regenerate it over time.

Another concern this year is the growing imbalance between mission programs and the number of people needed to support these programs. This end strength problem is caused by limitations in specific areas--such as a ceiling on the number of military troops in NATO Europe. If European end strength ceilings remain in force during FY 87, we must reduce support capabilities and programs to allow us to continue modernizing and expanding in new missions such as the ground-launched cruise missile (GLCM).

As in past years, the Air Force takes the lead in supporting the Total Force. The Air Reserve Force (ARF) is programed to grow ten percent by FY 91. The active force will grow less than two percent over the same period. This is a direct result of our effort to place as much of the Total Force structure growth in the ARF as possible, while maintaining both a prudent balance in their ability to absorb that growth and an overall Air Force capable of meeting peacetime and contingency taskings.

Manpower

Military Manpower Growth. Active military manpower is programmed to grow 700 spaces, or about one-tenth of one percent, in the FY 87 Budget. Approximately, 9,300 new requirements have been accommodated from within the existing baseline. These requirements include increases needed for (1) deployment of the B-1 bomber, modernization of tactical fighters (F-16), airlift (C-5B), special operations aircraft, and the ground launched cruise missile (GLCM); and (2) increased readiness and sustainability initiatives such as aircraft maintenance, chemical-biological defense, and medical support. Offsets for these increases were identified by rebasing or eliminating older weapon systems and by Air Force management initiatives. For example, strong retention allowed us to reduce accessions and training. Congressional elimination of civilian ceilings for FY 86 allowed us to convert non-military essential positions to civilians. Contracting actions reduced 1,100 military positions and the consolidation of data processing and telecommunication centers provided additional savings.

Civilian Manpower Growth. The Air Force is requesting a civilian manpower increase of 1,558, or six tenths of one percent, for FY 87. These additional authorizations support: new weapon systems such as the B-1B and F-16, aircraft maintenance, and C-17/B-1B/Peacekeeper logistics support. The growth includes an additional 569 civilians to serve as Military Technicians to provide full-time support for our Air Reserve Forces. A portion of the civilian growth is a result of mix decisions where military positions in non-military essential skills have been converted to civilian positions. These conversions, along with military to civilian conversions associated with OMB Circular A-76 actions, account for approximately 38 percent of the civilian growth.

Civilian employment was not managed by end strength in FY 86. The results of the FY 85 test clearly demonstrated the Air Force's capability to prudently manage the civilian workforce, and in the absence of ceilings, we will continue to prove that reestablishing ceilings would be counter-productive.

Women in the Air Force. The Air Force has long been a leader in providing opportunities for women to serve their country. We are proud of the fact the Air Force has the highest percentage of women in any of the Armed Services (11.8 percent as of December 31, 1985). In the 1985 DoD Authorization Act, we were directed to enlist 19 percent women in FY 87 and 22 percent in FY 88. In response to this legislation, we conducted a study to analyze the effects of varying male and female force levels.

Our study was completed and forwarded to Congress in April 1985. The study found the declining youth cohort would have little effect on the Services' abilities to recruit high quality enlistees. Concurrent with the release of the report, the Secretary of the Air Force approved a new combat exclusion policy which more clearly defined combat and non-combat positions. The significant change to policy is that women may not be assigned to positions where there is a high probability of hostile fire and capture. As a result of this change, 800 additional positions were opened to women. For example, CINCSAC opened Minuteman combat crew positions to women. The study concluded we should not recruit men and women in fixed percentages, but should develop a genderless feature in our accession methodology which will allow the male/female mix to fluctuate with changes in the eligible/qualified/interested marketplace. Based upon these current factors, we anticipate female accessions of about 19 percent for FY 86, but need relief from the mandated, fixed female accession percentages.

European Troop Strength Ceilings. Since FY 83, Congress has limited the level of US military manpower in Europe because it has perceived European reluctance to fund conventional force capability adequately. The FY 86 ceiling of 326,414 for all Services includes manning for GLCM and Pershing II missiles which are being added to the theater. Until Congress is convinced that our NATO allies are improving their conventional defense capability, it appears that the limit will remain in force. We believe focusing on methods to influence allied contributions clouds the real issue—that our force level growth is tied to countering a growing Soviet and Warsaw Pact conventional capability. This capability includes force expansion, modernization and improved force projection. We established the size and composition of US forces in Europe to help our allies meet three vital objectives: preserve NATO's political integrity, deter aggression and militarily defeat any attack on NATO.

We have made trade-offs to maintain mission capability and remain below ceilings through mission transfers, unit deactivations, undermanning and civilianization. To complete the GLCM program, as well as other Air Force programs that USCINCEUR (the theater commander) has identified as "critical growth," we must sacrifice lower priority theater resources that will decrease available conventional capability. If Congress continues to impose constraints on US military manpower levels in Europe, readiness will be degraded. We believe the ceiling should be eliminated and USCINCEUR should be permitted to determine the appropriate force mix and level for each Service based on the Soviet threat.

General Officer Grade Relief. The Air Force urges Congress to act on DoD's Comprehensive Flag and General Officer Management Legislation. Our position remains unchanged: the number of general officer authorizations must grow to support our increased mission, budget and personnel strength. Last fall, we were encouraged by indications that both Armed Services Committees would schedule hearings early in 1986 on this critical legislation. If it appears that Congress will again be unable to take up this important legislation, we ask authorization to return to the FY 81 strength levels. Even as an interim measure, this token increase would go a long way toward improving our leadership and management posture in the Air Force at practically no cost to the taxpayer.

In the event this relief is not forthcoming, we must again ask to extend or make permanent the exemption granted in the FYs 84, 85 and 86 Authorization Bills which will allow us to continue a four-star general as commander of our Air Training Command.

Recruiting and Retention

Recruiting. The Air Force's capability in the 1990s and beyond depends on how well we recruit. New officers and airmen must be able to learn the skills necessary for initial duty and to grow into the challenges of tomorrow. Since FY 80, we have met our goals for enlisted accessions, and since FY 84, we have made all officer objectives. This success has done much to offset the problems of the late 1970s.

The Air Force meets the recruiting challenge at the lowest cost per accession of any Service, and our quality is excellent. In fact, our cost per accession has dropped slightly in constant dollars over the past few fiscal years, and our recruiter productivity is far greater than the DoD average. Our success and the success of our sister Services in attracting high quality recruits proves there are enough quality people to meet all our needs.

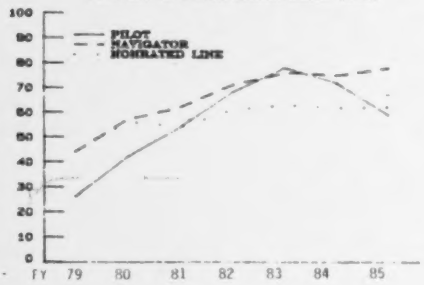
However, as the economy continues to improve, we anticipate increased private sector competition for highly qualified, technically oriented people. We are also concerned about the potential loss of key people involved in such fields as aircraft maintenance, weapons system procurement, computer analysis and engineering. Our FY 87 budget submission for $157 million, for recruiting, advertising and examination of recruits, is limited to inflation growth.

Retention. Air Force retention peaked in FY 83 and, as expected, has started to decline in some areas. Although declining, reenlistment rates remain high by historical measure. Pilot retention is our greatest concern as rates continue down; however, certain high-tech and sortie-generating enlisted specialities are also showing downward movement. Factors which may result in a decline in retention across the board include improved private sector employment opportunities, a widening pay comparability gap, threats to the military retirement system and the uncertainties of future military budget cuts. Favorable economic conditions, such as airline hiring and low unemployment rates, constitute a significant "pull" factor. This highlights the importance of recognizing and minimizing the effects of "push" factors created by budget cuts or policy changes.

As the accompanying officer retention chart shows, navigator and nonrated line officer retention rates have stabilized near record levels while pilot retention continues to decline. The pilot cumulative continuation rate declined from 72 percent in FY 84 to 59 percent in FY 85, and the downward trend is likely to continue. Airline hiring has provided unprecedented employment opportunities for Air Force pilots (as shown in The Airline Pilots New Hire chart). The airlines hired over 7,500 pilots in CY 85 in anticipation of industry-wide expansion. These expansion efforts and increased airline pilot retirements will likely provide a sustained demand and competition for pilots through the decade, although probably at more moderate levels. This demand for pilots will place a premium on the experienced and disciplined Air Force pilot. Over the past several years, high retention has enabled the Air Force to eliminate large pilot shortages (1,302 in FY 79) despite an increasing pilot requirement. The pilot inventory and requirement are currently in aggregate balance, but the situation is delicate. Improved retention will be required to prevent shortages from reappearing.

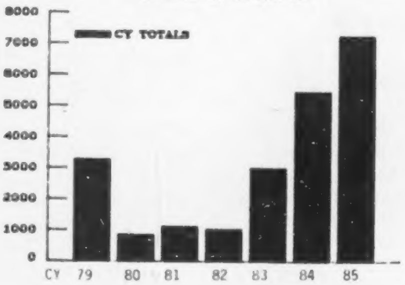
OFFICER RETENTION SUMMARY

CUMULATIVE CONTINUATION RATES (CCR)



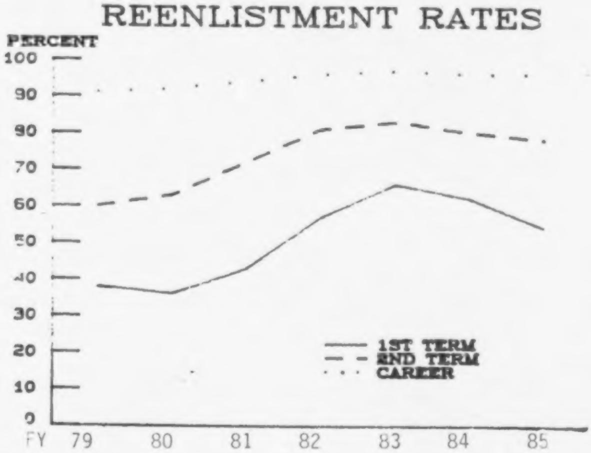
AIRLINE PILOT NEW HIRES

DATA AS OF 30 NOV 86



Reenlistment rates declined in FYs 84 and 85, as depicted in the following chart. One area of concern is the 12 percent drop in the first-term rate since FY 83. History has taught us that the Selective Reenlistment Bonus (SRB) Program is vital to satisfactory retention in our critical, warfighting skills. Significant cuts to SRBs have set the stage for greater losses, followed by personnel shortages similar to those suffered in FY 79. While overall enlisted manning is currently at authorized levels, we are experiencing mid-level NCO shortages in certain combat-related areas such as intelligence, avionics and aircraft maintenance. To maintain experience, we have increased promotion opportunities in Chronic Critical Shortage (CCS) skills, beefed up prior service recruitment of selected Air Force members and implemented a policy that keeps a few qualified NCOs beyond mandatory retirement points. However, the most effective initiative has been the SRB program. Our concern is whether these initiatives will continue to be sufficient to meet the private sector competition for our highly trained personnel.

In light of increasing job opportunities in the private sector and accompanying higher salaries, we anticipate stiff retention challenges well into the 1990s.



Training

Training is both a powerful recruiting incentive and an essential military function, directly affecting how well our people perform their missions. Training in the Air Force, including associated military construction and base support, costs more than $1.8 billion each year. Almost 80 percent of that is salaries for military and civilian personnel, and the Air Force gets a good return for its training dollar. We have reduced the average initial skill course length from 16.8 weeks in early 1970 to 11.7 weeks in 1985, while there have been quantum leaps in the material being taught.

While training is a "cost of doing business," we are well aware that we must find new and innovative ways do our training. We are using simulators and computer based instruction to improve the quality of training at a lower cost than otherwise possible. We are also adapting interactive video disks, high resolution computer graphics, and exportable courseware used on computers already in offices and shops to moderate costs.

The Air Force has an initiative in FY 87 to establish a Manpower, Personnel, and Training (MPT) function at the Aeronautical Systems Division, Wright-Patterson AFB, Ohio. The MPT function will be responsible for improving front-end analysis and bringing critical MPT factors into weapon system design considerations. This will ensure a better man-machine interface and provide systems with lower human costs throughout the system life cycle.

Total Force

The Air Force—including all active duty, civilian and reserve components—organizes, trains and is equipped as a team. The Air Reserve Forces (ARF) make significant contributions to security and military readiness by providing depth, continuity and balance to the responsiveness and flexibility of the active force. The proper active/ARF mix ensures that we have the force structure and manpower to meet the requirements for deterrence, peacetime presence and immediate response.

For FY 87, Air National Guard growth (290 Military Technicians, 1,087 Active Guard/Reserve spaces, and 3,254 drill positions) supports force structure, modernization, readiness and sustainability initiatives. Assignment of C-5, C-141, and C-130 aircraft, as well as modernization efforts involving F-16s, were the major reasons for this increase. Additional manpower was necessary to support this force structure and improve readiness and sustainability in medical functions, PRIME RIB teams and the F-4 maintenance areas.

The Air Force Reserve growth (279 Military Technicians, 41 Active Guard/Reserve spaces, and 3,059 drill positions) supports assignment of C-5s, C-141s and modernization of the force with F-16s. Readiness and sustainability are supported through medical increases, civil engineering and additional mobilization augmentees.

Although the Air Force leads in implementing the Total Force policy, criticism of specific areas continues. There is a movement to reduce additional active manpower authorizations by transferring more missions to the ARF. Congressional involvement in the active/ARF mix determination process has been based primarily on the misconception that transfers from the active to the ARF component will reduce Total Force costs with no loss in overall capability.

There is little disagreement that ARF units are usually less expensive to maintain than similar active units; however, analysts must recognize that the reduced costs are caused primarily by the reduced activity levels. Other factors, such as personnel costs, retirement costs, base operating support costs, and military and civilian grade structure comparisons, must also be addressed when comparing active and ARF units. Readiness indicators show that ARF units meet their required combat capabilities. However, in some mission areas their selected combat roles are more narrow and less training-intensive than their active counterparts. Therefore it is cost-effective to have the ARF performing these specific missions. Whenever active-to-ARF transfers are considered, Total Force combat capability, cost-effectiveness and specific mission requirements must be addressed.

Military Personnel Initiatives and Issues

Pay comparability, the military retirement system, Aviation Career Incentive Pay, PCS reimbursements, and dependent dental care are some of the areas deserving attention and support this year. We support the FY 87 Presidential pay raise initiative of 4 percent and efforts to preserve the value of the military retirement system. Another important personnel issue is the proposed IRS ruling regarding the tax exempt status of military allowances. Imposition of this ruling would deal a significant financial blow to our people.

Pay Comparability. Military pay must be reasonably comparable to pay available in the private sector if the Air Force hopes to compete for quality volunteers and retain an experienced military force for the long term. We are deeply concerned about the four consecutive pay caps (FY 83-FY 86). Although pay raises during these years have kept pace with inflation, they have not maintained comparable wage growth with the private sector. Even with a 3 percent pay raise in FY 86, the comparability gap between military and private sector wages has increased to 8.1 percent (Employment Cost ,Index) since FY 82. We cannot afford to repeat the same mistakes of the late 1970s. We survived those near disastrous recruiting and retention problems only because we had the experience cushion from the Vietnam-era, and we were reducing force size. Today, we don't have that cushion. In the long term, we must ensure our members receive reasonably comparable pay, while striving for full comparability levels, or we will once again see an exodus of those with highly transferable skills and find it extremely difficult to recruit quality personnel.

Military Retirement. The purpose of the military retirement system is readiness. It is not an old-age pension plan, but a key element of the military compensation system. It helps to maintain a youthful, combat-effective force and provides a mobilization pool of retirees subject to involuntary recall to active duty.

Our current retirement system has served us well in the past and is working well today. We believe the system is cost-effective in the context of the total military compensation system, providing us the right numbers of high quality people to serve in the military profession. If we continue to modify the system and reduce retirement benefits further, we will have to pay the price somewhere else—in additional recruiting and training costs, in higher special and incentive pays or active duty pay and, most importantly, in reduced readiness. Major changes currently under consideration will, if enacted, reduce the lifestream value of retirement pay by 16 percent. When added to the 13 percent loss due to high-three averaging in 1980, our future retirees will receive over one-fourth less retirement pay than current retirees. After 20 years of military service, future members will receive about 25 percent of regular military compensation. Current retirees receive about 34 percent. We are concerned that continuation of this trend will undermine the morale of our men and women in uniform.

Tax Exempt Status of Military Housing Allowances. The Internal Revenue Service (IRS) has indicated that Revenue Ruling 83-3, which disallows deductions for mortgage interest and real estate taxes to the extent such expenses are paid from a tax-free allowance, may be imposed against military homeowners in January 1987 unless

Congress intercedes. Such a ruling would have a devastating financial impact on military homeowners. Nearly 300,000 of them would incur an additional tax liability of approximately $1,000-$4,000 annually, the equivalent of a three to five-percent pay cut in the grades most affected; i.e., the career force of E-5s through O-5s. Also, Ruling 83-3 ignores the fact that the tax-exempt status of military allowances is an integral part of the military compensation system and has been accounted for in establishing pay levels since 1965. The Air Force strongly opposes the IRS ruling and supports the provisions in the House-passed tax reform bill to preclude implementing Ruling 83-3 against military homeowners.

Aviation Career Incentive Pay. Aviation Career Incentive Pay (ACIP) was established by the Aviation Career Incentive Act of 1974. It provides an incentive for rated members to complete a full aviation career by meeting statutory requirements for flying ("gates"). As a career incentive, ACIP continues while rated officers are in non-flying jobs, ensuring a ready resource of experienced aviators if needed for combat, and providing valuable operational flying expertise in key staff positions.

Preserving the incentive value of ACIP is vital, especially since the competition from the private sector for pilots is increasing. More jobs are available due to the economic recovery and, in particular, airline hiring has continued to increase over the past few years (over 7,500 pilot hires in CY 85).

Retention of pilots, whose training costs average $750,000, is a primary consideration in rated force management. In 1979 the Air Force experienced a severe pilot loss but was able to absorb the loss due to a large pool of pilots left from the Vietnam era. Today that reserve of pilots is gone. Current retention is extremely fragile, and any large losses would result in the Air Force being unable to meet its requirements. Although pilot production increases could offset the losses numerically, the length of time needed to season these new pilots would result in an overall decline in the experience level and combat capability of the force. This loss of experience translates into degraded combat capability and decreased flying safety.

Overall, ACIP is a cost effective program. The savings in training costs, by preventing the loss of just 190 pilots, would offset the entire FY 87 ACIP Budget of $141.4 million. The aviation career concept embodied in ACIP provides a predictable, continuous entitlement that has proven essential to rated force management objectives.

Permanent Change of Station (PCS) Reimbursement. A 1984 Air Force survey revealed that, exclusive of homeownership costs, for every $4 our people spend on a PCS move, the Government reimburses only $1. This translates into out-of-pocket expenses from $1,400 to in excess of $2,700 each time our members are directed to move. This situation is even more alarming because over half of our members have had to borrow money or withdraw savings to meet expenses resulting from Government-directed moves. Also, the survey shows that PCS costs are a major career detractor for many people. These large, unreimbursed, out-of-pocket costs are making many members more reluctant to relocate.

To reduce this financial burden, Congress, in FY 86, funded: (1) a four-day CONUS temporary lodging expense allowance; (2) a household goods weight allowance increase, a CONUS dependent mileage allowance, and the "with dependent" rate of dislocation allowance for CONUS moves for junior enlisted personnel; (3) a mileage allowance for dependents under two years of age; and (4) a travel allowance for members to relocate their families after reassignment to an unaccompanied tour. In addition, Congress approved implementation of a new mileage and per diem allowance for dependents of all members, provided DoD would absorb the additional cost of this initiative from available FY 86 PCS funding. These actions will significantly reduce the financial burden associated with PCS moves. Preliminary estimates are that these improvements will reduce the 4:1 ratio of out-of-pocket expenses to slightly below 3:1. However, it is important that we maintain our momentum to further reduce PCS hardships. To this end, we urge Congress to fund, in FY 87, a household goods weight allowance increase for all grades.

Dependent Dental Care. Dental insurance is our primary dependent health care initiative. It is essential to the health and well-being of Air Force dependents. The FY 86 Authorization Bill authorizes dependent dental insurance coverage to include preventive, diagnostic, emergency and basic restorative care, but specifies this new program cannot be funded prior to September 30, 1986. The need for family dental benefits has been consistently mentioned by service members during quality of life surveys. A relatively low cost program, dental insurance will more than pay for itself in terms of recruiting and retention. As a major morale booster, it will help dispel the perception that military benefits are continually being eroded.

The American Dental Association estimates that by 1990, 50 percent of the population will be covered by some form of dental insurance. To stay competitive with private industry we need a fully funded, dependent dental insurance program.

Civilian Personnel

Civilian employees continue to function as a highly effective and stable segment of the total force. Working side by side with our officers and NCO's, they provide not only a much needed experience base, but also a training cadre for our young men and women. Without their dedication and hard work, the Air Force would not be able to achieve and maintain its high state of readiness.

While we would like to achieve more of our program goals by expanding civilian employment, we recognize competition for limited resources will make that option very difficult. Thus, we are looking at ways of "realigning" civilian manpower. To accomplish this systematically, a study is underway to determine if civilian overtime can be judiciously expanded, enabling manpower resources to be reprogrammed. We are also looking at ways to increase our part-time work force. With these initiatives we recognize an advantage of the civilian force in meeting the Air Force mission; i.e., employment flexibility.

While we are exploring ways to manage our people in a more cost-effective manner, we are also concerned about our ability to recruit and retain them. We have found that many of our most highly skilled and experienced civilian employees, especially in high-tech positions, are sensitive to opportunities in the private sector or are close to retirement. Therefore, we have undertaken an ambitious intern program designed to attract recent college graduates. The initiative has become even more significant, considering recent restraints on federal pay.

Finally, although we have been able to attract young, professional talent to the Air Force, we are concerned about retention. To ensure work force stability, the issues of federal pay, benefits and retirement systems need long-term solutions. The time has come to work toward the goal of adjusting white-collar pay by occupation and locality. The Air Force is prepared to fully cooperate with the executive and legislative branches to achieve competitive pay, benefit and retirement packages.

Civilian Pay Comparability. Budget deficits and criticism of the Federal pay determination process have led to withholding comparability increases over the past eight years. As currently measured, the comparability gap reported by the President's Pay Agent for October 1985 was 19.15 percent. The President's alternative recommendation for FY 86, which Congress adopted, froze pay schedules at the FY 85 level.

Numerous studies and reports (GAO, Hay/Huggins Co., Congressional Research Office (CRO), Office of Personnel Management (OPM), and Bureau of Labor Statistics (BLS)) of Federal pay and compensation issues have been done. Most agree that comparability with the private sector is the most appropriate method for establishing Federal pay. Systemic changes to current methodology are required. The comparability survey should be broadened to include smaller establishments, more representative jobs and the inclusion of state and local government job comparisons. The Pay Agent also plans to develop additional pay setting tools which consider work force quality and turnover for future use in the annual pay setting process.

Federal pay should be viewed from the perspective of total compensation comparability; i.e., pay and benefits. These recommended changes should be made quickly, and a return to comparability restored.

Civilian Retirement. The current Civil Service Retirement System has suffered reduced benefits in recent years. The Air Force must not lose the ability to recruit and retain top quality employees, particularly those in high technology occupations critical to the Air Force mission. Any further legislation against this objective must be carefully considered.

The new supplemental retirement system for Federal employees hired after January 1, 1984 must also contain a level of benefits that will ensure the Federal Government is competitive with major employers in the private sector, with whom we must compete for skilled employees.

MANAGING RESOURCES

We must have both a strong defense and a strong economy. Considerable discussion continues concerning the US economy's ability to support the planned defense buildup without contributing to large federal deficits. The facts remain that defense spending in FY 87 amounts to a smaller share of the federal budget than during the 1950s and 1960s, even though the potential threat is greater than at any time in our history. Because the threat is growing unabated, we will be under intense pressure to better employ our available assets and better manage our acquisitions. As stewards of the taxpayers' dollar, we are committed to getting the most defense from every dollar we're given.

Today, our acquisition process is pressed by heavy demands. The post-Vietnam drawdown and subsequent underfunding of defense programs in the 1970s left us with weapons that fall short of our needs. Throughout the 1970s, the Soviets pursued a steady buildup of offensive forces, maintaining a substantial quantitative edge over the US and dramatically narrowing the qualitative advantage we held in forces. Our current, heavy investment in force structure modernization is imperative; we must maintain our edge in weapons quality and technology to offset Soviet numerical advantage.

To further improve the quality of the weapons we procure, we are demanding improved reliability and maintainability (R&M) of both new and fielded weapon systems. This commitment is the cornerstone of the R&M 2000 action plan, implemented on February 1, 1985. The Air Force will demand, support and reward defense contractors for improved R&M. Improvements in R&M pay off over the long run by creating better combat capability, reducing operating costs and lowering personnel requirements.

. Even small errors in allocating funds lead to an unacceptable waste of scarce resources. Consequently, we are constantly evaluating and improving our acquisition process. With the impetus of the Defense Acquisition Improvement Program, the Air Force has instituted additional management improvements to control costs, increase stability, and increase competition at the prime and subcontract level.

Acquisition Management Enhancements

The FY 87 budget was developed, considering a broad range of new acquisition management practices. Within the past year, the basic process through which we acquire and support complex weapon systems has been subjected to meticulous evaluation and stringent management. Procurement procedures have been improved, and management procedures have been refined to ensure better control of our resources. In conjunction with this budget submission, significant improvements will be implemented in basic acquisition policy, spare parts acquisition, people programs, and reliability and maintainability.

Acquisition Cost Reduction. The high cost of systems is being reduced through competition, acquisition streamlining, program stability, "should cost" reviews, work measurement, data management and a variety of other techniques. Increasing competition across the board in Air Force contracting is a top priority.

Increased Competition. The most widely recognized method to lower the procurement cost of an item, service or entire system is to openly compete the acquisition, a strategy the Air Force has been using for years. With the increased emphasis on improving the acquisition process, we instituted a Competition Advocate Program in January 1982, which directed all major air commands and operating agencies to appoint competition advocates to establish competition requirements and develop acquisition strategy. The Competition in Contracting Act established an Air Force Competition Advocate Office, headed by a general officer, who reports to the Assistant Secretary of the Air Force for Research, Development and Logistics. The competition advocate challenges barriers to full and open competition; reviews justification for significant non-competitive procurement actions; recommends and tracks competition goals; and provides policy directives to assign accountability for competition. As a result of Air Force efforts in competition advocacy, we exceeded our 1985 competitive procurement goal and increased our 1986 goal to 42 percent of our procurement obligations.

The Air Force seeks competition at both the prime contractor level and at subtier levels, such as subsystem subcontractors and component vendors. We attempt to keep several contractors competing in the development of the weapon system at the prime contractor level, until costs prohibit funding too many contractors simultaneously. As an example, the Air Force contracted with seven prime contractors through the conceptual phase of the Advanced Tactical Fighter program and intends to keep at least three contractors competing through the demonstration/validation phase of the program.

Another technique used to increase prime contractor competition is developing a second source for the system. We can start cultivating a second source reasonably early during the system acquisition process to achieve a second source availability at the beginning stages of production. One of the best examples of this form of competition is between General Electric and Pratt and Whitney, resulting in engines with improved operability and reliability. We now have two suppliers, and each gives warranties with their engines. Follow-on competition is continuing for spare parts. We estimate savings from this competition will be from $3 billion to $4 billion.

Below the prime contractor level, the Air Force evaluates each potential procurement to determine the feasibility of breaking the procurement into subsystems and components, each of which may be competed. The Air Force then serves in the integrating contractor role, thereby saving the prime's intermediate cost. As an example, the F-16's wheels, brakes and radar are separately purchased.

Acquisition Streamlining. We believe overspecification can be a significant cost driver during weapons acquisition programs. In seeking ways to reduce unwarranted specification requirements, the Air Force has already changed regulation and review processes to further encourage tailoring of specifications to control unnecessary costs. In addition, overspecification control has become one of the basic considerations in our Zero Overpricing Program. We have also created the position of Streamline Advocate. This position was established to systematically review the acquisition process and apply cost saving methods and initiatives to reduce the time and cost of weapon systems while improving product quality. In order to be fully successful, we will continue current initiatives, control requirements and streamline the acquisition process whenever possible.

Program Stability. To be efficient, the acquisition process must operate in an environment of stable requirements, adequate financial resources and strong managerial support. Without improved stability, the acquisition process will be continually faced with uneconomical program stretch-outs, cost overruns, technology updates and management inefficiencies. The FY 87 program is based on employing proven management techniques to encourage this vital stability in programs. We have made major improvements in stabilizing the management of programs, with longer tours for program managers. However, program management, in an atmosphere of expanding needs, offers a major challenge to program stability.

Program Baselines. Acquisition program baseline agreements enhance program stability after a program reaches full scale development by minimizing changes and ensuring tradeoffs are made with full understanding of program impact. We baseline major programs, such as the B-1B and the Defense Meteorological Satellite program, that offer the greatest potential for controlling costs through requirements stability. Each baseline is a formal agreement between the weapon system developer, usually Air Force Systems Command, the user, such as Tactical Air Command, and the supporter, usually Air Force Logistics Command. The participants agree in writing that the requirement, direction, funding and schedule will allow us to field a system when it is needed, at a realistic cost, with proper logistics support and the required capability. Changes are reviewed by all participants to ensure full understanding of impacts to the program. This process has resulted in better communication between all participating commands and agencies and, ultimately, more stable programs.

Multi-year Procurement. While control of changing requirements is important, funding stability is also a major contributor to program success. Multi-year procurement, with Congressional support, has become a significant factor in stabilizing funding during a program's production phase. With freedom from disruptive quantity changes, contractors can economically procure material and set up efficient production facilities. Since the multi-year law was expanded in 1982, the Air Force has initiated thirteen major efforts involving multi-year contracting techniques, resulting in savings of over $3.2 billion.

Should Cost. Should Cost reviews are being conducted on our major procurement programs to ensure that engineering labor, manufacturing effort, and overhead resources are being used as efficiently as possible. A government evaluation team, consisting of engineers, auditors and pricing specialists, reviews all areas of cost and prepares an overall evaluation. These recommendations are then used in the formulation of price objectives used during negotiations. Should Cost team members participate in negotiations and assist the contracting officer in realizing available savings. Should Cost analyses have yielded significant cost savings in the past. To aid in evaluating other programs, documentation becomes part of a history available for use by other Should Cost teams, faced with similar program efforts.

Work Measurement. Program managers have incorporated the requirements of MIL-STD-1567A, "Work Measurement," into their contracts to obtain direct labor productivity information for use in estimating manufacturing costs. Air Force Systems Command reviews contractor productivity data in all program assessments and has issued a policy requiring the use of engineering work standards in estimating and negotiating contract costs.

Data Management. Access to technical information remains one of the greatest challenges to acquisition management. One project to integrate data systems requirements bears special mention.

The Air Force Systems Command's management office for the automation of technical information oversees seven major Air Force projects in the areas of computer-aided design and computer-aided manufacture, engineering drawings and specifications, and technical publications. Each project is funded separately, has its own management organization and seeks a unique end product. To assist each project in reaching its goal and to guard against any duplication, the management office has taken on the role of integrator. All projects must progress toward, and contribute to, the same basic goal: a totally integrated capability to create, store, maintain, retrieve and distribute data, using wholly digital technical information in support of all Air Force weapons systems throughout their life cycles.

Spare Parts and Support Equipment Acquisition

Our spare parts acquisition and logistics system is a very effective and efficient system. We support 122 active bases and 150 Guard and Reserve installations as well as radar sites, ballistic missile locations, electronic combat operations sites and other auxiliary airfields. In all, we support some 2,835 installations around the world. In the area of spare parts alone, the Air Force manages some 890,000 different types with an active inventory worth more than $38 billion. We process more than four million procurement actions each year. The system is large, complex and dynamic, employing literally hundreds of thousands of people. Recognizing its size and complexity, we have worked hard to identify deficiencies and improve the system. As a result, many new procedures have been implemented that will permanently correct faults. The basis for these improvements has been a series of major studies undertaken by the Air Force over the past years to uncover the reasons for high spare part costs. The Air Force's internal oversight and review systems revealed significant savings could be realized within this funding through tighter management actions.

Requirements Forecasting. The first spare parts initiatives involved a change to the requirements process. In April 1983, a study (CORONA REQUIRE) was completed, recommending 26 different improvements to the Air Force's system for forecasting aircraft replenishment spares. All 26 actions have been implemented and will produce significant savings in the future.

Spares Pricing. The most exhaustive spare parts study ever undertaken by the Air Force was produced by the Air Force Management Analysis Group (AFMAG) in October 1983. The 62-member group of logistics and contracting professionals made 178 recommendations which have served as the Air Force's guidepost for solving the overpricing problem. The group found that, as a result of spares underfunding and a lack of manpower, the acquisition process had not focused on low value spares contracts. A lack of competition, limited data, manpower constraints and ineffective pricing techniques were to blame. A General Officer Steering Group at Headquarters Air Force continues to direct and monitor implementation of these reforms by Air Force acquisition personnel at all levels. It is our intent to institutionalize these reforms to preclude a recurrence of the problem.

Support Equipment Review. Support equipment development and purchase must parallel weapon system development and production to ensure a supportable system is placed in the field. In 1984, a Support Equipment Acquisition Review was completed which analyzed this process carefully. Nineteen areas were identified for improvement in forecasting, planning and pricing. The review identified controls needed to deter the proliferation of unique support equipment and specialized tooling. The General Officer Steering Group is following up on the review to ensure changes are implemented in areas identified for improvement.

Replenishment Spare Parts Breakout. The Department of Defense Spare Parts Breakout Program is a major management enhancement that requires the identification of all parts procurable competitively or from actual manufacturers rather than from the prime contractor. To accomplish this goal, Air Force Logistics Command Competition Advocates screen anticipated buys for potential breakout to the actual manufacturer. Ninety-seven percent of the candidate items reviewed in FY 85 were selected for breakout. In FY 87, we expect the breakout program to continue increasing competition among Air Force contractors, to reduce sole source procurements, to broaden the industrial base and to lower prices for spare parts. Although this effort places greater demands on Air Force personnel to assume responsibility normally borne by prime contractors, we believe the savings will outweigh the added costs in personnel.

New Policy on Spare Parts Retention. We continue to stress a philosophy of retaining spare parts. Previously, we viewed the disposal of spare parts in our economic interest, if the inventories exceeded specific long-term usage projections. Now, instead of facing the potential that discarded parts might have to be repurchased, we direct Air Force managers to retain parts as long as we have systems that may ever require them. In the long run, it should save money and contribute to our readiness. The Secretary of the Air Force directed a five-point program in 1984 that began with a moratorium on all disposal actions. We are pleased to report that new procedures are now in place to implement the five-point retention program, and the moratoruim has been lifted.

People Programs

The professionalism of the acquisition management community is an issue of major importance not only to the Air Force, but also to Congress and the American public. Our acquisition management initiatives are designed to develop an even more professional, better qualified cadre of acquisition personnel. Training, education and experience are focal points in our management of personnel resources.

Acquisition Career Field. The Air Force has long recognized the need for a well-qualified acquisition community and is a leader in acquisition training and career development. Our acquisition career field offers progression paths to General Officer and Senior Executive Service levels, and our personnel are among the best trained in DoD. Air Force training and career development programs have proved successful, and we have provided OSD with information gained from our experience for formulation of an OSD position on training, education and experience objectives. We continue to work with OSD to develop ways to improve the professionalism of our acquisition work force.

Project COPPER TOP. Project COPPER TOP was instituted to examine current training shortfalls within the contracting work force. A planning team was organized to size requirements, identify problems with the training system, develop alternatives and prepare a plan for corrective action. The additional training funds, provided by the FY 86 Defense Appropriations, combined with the FY 87 budget, will help correct a 60 percent shortfall in the completion of mandatory training courses. Current action items include establishment of mandatory training requirements for the Quality Assurance career field, establishment of a mandatory contracting officer course and participation in course reviews.

PALACE ACQUIRE. PALACE ACQUIRE is a centrally-managed and funded competitive intern program. This initiative was established in 1985 and is targeted to recruit recent college graduates to entry-level GS-5/7 trainee positions in a variety of occupational fields. The program scope is based on work force analyses of turnover rates, mission and technological changes. The contracting career field, for example, already has a turnover rate 13 percent above other career fields. The Air Force projects a 20 percent loss of contracting professionals due to retirements alone in the next five years. PALACE ACQUIRE will maintain civilian work force stability and expertise in major functional areas by providing a pipeline of experienced, highly skilled civilian employees.

Reliability and Maintainability 2000

In the past, reliability and maintainability (R&M) steadily improved as new technology was applied to our weapon systems. For example, the Maintenance Manhours per Flying Hour (MMH/FH) have declined for fighter aircraft. The F-15 requires only 85 percent of the MMH/FH as the older F-4 aircraft, and the F-16 requires roughly half the MMH/FH as the F-4. This reduction has allowed us to increase readiness by increasing flying hours without increasing manpower. While these improvements are noteworthy, the challenges we now face are becoming more numerous and severe. The growing Soviet threat has made our operating bases and the systems, people and support equipment located there increasingly vulnerable. Successful operations in this environment demand increased warfighting capability, survivability and mobility. In addition, manpower availability will decrease over the coming decade, making it more difficult to recruit and train the technical personnel needed to maintain the increasingly complex weapon systems. Finally, current budget realities demand lower operations and support costs.

To help overcome these challenges, the Air Force implemented an action plan in February 1985 called R&M 2000. A basic tenet of this multifaceted effort is that R&M improvements can and must be accelerated on fielded and new weapon systems. The payoff from this acceleration will be enhanced combat capability, increased survivability of the combat support structure, more efficient use of mobility and manpower assets, and lower operations and support costs. Two R&D programs that can help us achieve these payoffs are R&M Maturation and Technology Insertion Program and the Productivity, Reliability, Availability, Maintainability Program (PRAM).

The R&M Maturation and Technology Insertion Program takes a two-pronged approach in attacking the Air Force's more pressing R&M needs. First, we intend to fund selected high leverage, generic R&M maturation and technology programs for insertion into current weapon systems. The second effort provides a vehicle to accelerate and apply emerging technologies to developing weapon systems, as well as, future weapon systems. The thrust of this latter initiative is to reduce the cost, schedule and technical risk.

The three largest projects within the R&M Maturation and Technology Insertion Program are the On-Board Inert Gas Generating System (OBIGGS), Molecular Sieve Oxygen Generating System (MSOGS), and radar maturation for the F-15 and F-16. The C-17 OBIGGS effort is well underway. This project will demonstrate the applicability of an OBIGG system for inerting airlift aircraft fuel tanks against fire and explosion. In FY 87, prototype fabrication will be completed and qualification testing will be performed to support a production decision. In addition, work will begin on incorporating OBIGGS into the C-130. In terms of MSOGS, studies and operational experience indicate that MSOGS provides significant improvement over the current liquid oxygen (LOX) system. These improvements include: higher reliability—by a factor of 10; greater survivability—LOX infrastructure not required; decreased mobility requirements—three to five fewer C-141 pallets per deploying squadron; decreased manpower requirements (per wing), and lower life cycle costs. Our objective is to incorporate MSOGS into the F-15E as soon as practical. Finally, the radar maturation project will provide funding to transition-selected F-15/F-16 radar improvements into R&M modifications and enhance the radar manufacturing process. In FY 87, we intend to start work on developing an improved built-in-test for the APG-63 (F-15A/B radar) and applying a more stringent Environmental Stress Screening (ESS) to the manufacture of the APG-70 (F-15E radar).

The PRAM Program provides a means to immediately respond to identified weapon system problems through judicious and timely investments in projects, leading to improved combat effectiveness and lower life cycle costs. PRAM projects fall under the areas of airframes, avionics, propulsion, missiles, space, depot maintenance and other support areas. Since inception, PRAM has initiated 780 projects with an estimated savings to the Air Force of $3.1 billion. This equates to a $5 net return for every dollar invested in PRAM development and modification. The following are examples of PRAM projects:

- F-15 Honeycomb Structure Replacement for Stabilators and Wing Tips. This project resolves corrosion, cracking and delamination problems on F-15 stabilator leading and trailing edges and wing tips by replacing the existing honeycomb structure with superplastically formed bonded titanium/aluminum. Replacement will provide a two-fold improvement in reliability. Development and implementation cost $3.5 million. Estimated five year savings, $18.3 million.

- B-52/C-130 Autopilot. PRAM has designed a state-of-the-art digital line replaceable unit to replace the three highest failure components of the B-52 and C-130 autopilots. Incorporation will provide a ten-fold improvement (25 to over 250 hrs MTBF) in B-52 autopilot reliability and a doubling (200 to 500 hrs MTBF) in the C-130. Development and implementation cost $11 million. Estimated five year savings, $119 million.

- Extended Life Turbine Wheel. This effort developed new materials for the turbine wheels of the F-16 jet fuel starter (JFS) and the KC-135R quick start auxiliary power unit system (QSAS). This new material will extend the service life of the F-16 JFS from 500 starts to a minimum of 2,000 starts and the

KC-135 QSAS from 1,000 hours to over 2,600 hours. Development and implementation cost $1.1 million. Estimated five year savings, $30 million.

These successes have generated substantial growth in proposed PRAM projects from the Air Logistics Centers and Major Commands. As a result, PRAM approved projects from all its anticipated FY 86 funding and had to defer projects to the FY 87 program. Without question, the PRAM program is an Air Force success story. The $31.4 million requested for FY 87 is consistent with and reflects the increased demand for improved R&M in our weapon systems.

Fraud, Waste and Abuse

The Air Force Fraud, Waste and Abuse (FW&A) Program seeks to minimize the diversion of defense funds and resources by illegal, unauthorized or wasteful practices. Air Force policy is to use all available means to prevent, detect and correct FW&A. Our primary focus is on prevention before resources are lost.

In FY 85, the Air Force spent $175 million to conduct audits, investigations and inspections. There were 1,894 audits, 1,562 inspections and 1,722 Air Force Office of Special Investigations (AFOSI)-conducted fraud related investigations completed. Special emphasis has been placed on reviews of the high vulnerability areas; i.e., supply, comptroller, maintenance, procurement and information systems. Specially trained investigators have been assigned to support USAF plant representative offices in contract fraud investigations. An additional project is planned to increase investigative support to Air Logistics Centers to investigate spare parts acquisitions. Nine hundred thirty-nine hotline cases received action at Headquarters Air Force in FY 85—518 from Air Force sources and 421 from DoD.

AFOSI agents have presented approximately 2,200 fraud briefings in the last fiscal year to more than 83,000 personnel. These fraud briefings inform military and civilian resource managers, contracting personnel, commanders and other key personnel about the high level emphasis placed on FW&A and its impact on DoD resources. These briefings sensitize Air Force people to the fraud environment and their responsibility to report fraud when suspected or detected.

In FY 85, extensive investigative efforts resulted in over 1,800 cases, referred for prosecution by Air Force officials, and another 200 turned over to federal and local agencies for further investigation. The major savings to the Air Force as a result of this program has been in cost avoidance. Audit activities resulted in potential cost avoidances in FY 85 of $826 million.

Defense Industrial Base

The US defense industrial base produces and replenishes our warfighting systems and consumables, and its productivity, responsiveness, preparedness and ability to mobilize are critical to national security. We invest to maintain and improve our 14 government-owned and contractor-operated (GOCO) facilities and to modernize industrial capability through the Manufacturing Technology (ManTech) and Technology Modernization (Tech Mod) Programs. These programs establish new manufacturing processes, procedures and incentives to improve productivity and capital investment.

Over the long term, ManTech and Tech Mod return up to $10 for every $1 invested. By making production more efficient, ManTech and Tech Mod make weapons less costly and release Air Force funds for other needs. In FY 87, the Industrial Preparedness Program request totals $174.8 million, including $83.6 million for ManTech, $16.7 million for Tech Mod, $50.8 million for GOCO facilities, $3.2 million for industrial planning and $19.3 million for production surge.

Productivity Initiatives

The Air Force is actively pursuing a major initiative, through its Management Engineering Program. This program increases productivity and reduces operating costs by eliminating unnecessary and inefficient work practices. Virtually every Air Force function will be analyzed to increase operating efficiency without decreasing effectiveness. During FY 87 we expect to start 90 functional reviews covering 85,000 spaces. Primary emphasis is on enhancing operations through streamlined procedures and state-of-the-art equipment, and based upon our experience thus far, we are projecting a 3 percent savings through FY 86. These efforts are complemented by an aggressive Productivity Enhancing Capital Investment Program. Since FY 81, capital investments have saved about 1,200 spaces and offset a potential growth of over 2,500 additional manpower spaces. The average return on investment is now 8-to-1 in terms of dollar savings and cost avoidance. To reduce our manpower growth, future savings from the Functional Review Program and Productivity Enhancing Capital Investment Program will be realigned to higher priority requirements.

Contracting

We consider civilian contracting, when consistent with national defense requirements, to be a viable and efficient means to accomplish the defense workload. As a result, the Air Force contracts for commercial activities, covering approximately 74,000 contract workyears or 22 percent of the Air force civilian workload. We support a contracting out program in which each activity is critically examined according to its wartime role before it is certified for contract. Additionally, a contracting out program must be able to delegate to the Services the authority to determine whether an activity is eligible for contract or required in-house, to maintain readiness and respond to wartime tasking. Since 1979, the Air Force has completed over 490 cost comparisons (involving nearly 14,000 manpower authorizations). Sixty-nine percent of the workyears studied went to contract. We currently have approximately 500 cost comparisons scheduled (over 12,000 manpower authorizations).

PART II - FORCES, PROGRAMS AND CAPABILITIES

To provide the forces and capabilities required to meet national security objectives, this year's Air Force budget strikes a careful balance between readiness and modernization. We will also continue the efforts of past years to provide the quality training, support and new equipment necessary for continued deterrence across the spectrum of potential conflict. We have carefully developed our programs to provide essential support, manpower and training to our warfighting commanders and have a renewed awareness of our joint strengths and weaknesses.

The Air Force continues to actively plan and program its forces and strategies within a joint Services operational context. Many of the initiatives outlined in the Army/Air Force memorandum of agreement, signed in May 1984, have been implemented and have already improved inter-Service cooperation and our warfighting capabilities. We have canceled redundant programs and reviewed our planned systems to ensure the most cost effective use of the available fiscal resources. We are also working with the Navy to eliminate redundancy and reduce the cost of weapon systems acquisition; combat identification; electronic warfare; aircraft procurement; and munitions research, development, test and evaluation. The number of training exercises involving naval operations continues to increase. In addition, joint training opportunities are being expanded at minimum cost, through the construction and use of joint training ranges. We can and will do the job better together.

Our primary concern is to uphold our part of this task, and this year's request reflects difficult choices. The forces, programs and capabilities outlined in this section have been structured to achieve the required military capability based on economically sound procurement strategies.

STRATEGIC FORCES

The underlying principle of our national security policy is to deter war. As such, the strategy and forces necessary for deterrence have been and will remain preeminent in our military structure. Only with credible strategic forces can we convince our adversaries they cannot achieve their aims through armed conflict without suffering unacceptable losses.

During the decade of the 1970's, restraint and negotiations, rather than procurement and deployment, characterized US strategic efforts. The Soviets, however, did not follow suit and continued to rapidly expand the quantity and quality of their strategic forces. Consequently, the strategic balance began to swing in their favor. We are redressing this imbalance through the President's Strategic Modernization Program. Our concentrated efforts over the past few years have begun to reverse the decline in strategic force effectiveness. However, a formidable task remains.

Soviet Force Development

The Soviets have been engaged in a determined, steady increase in strategic nuclear weapons programs over the last two decades and have continually improved their military capabilities across the spectrum of strategic warfare. The momentum of these improvements is a clear and growing sign of Soviet intentions. They serve as a danger signal to Western security.

The Soviets understand the utility of a strong ICBM force. They have spent significant effort and money on improving both the capability and quantity of their ballistic missiles. Presently, their land-based force consists of approximately 1,400 launchers carrying nearly 6,500 warheads. The total payload (warheads) of these missiles is about three times that of the US ICBM force.

In spite of this significant quantitative advantage, modernization of the Soviet ICBM force continues unabated. The last US ICBM deployment, the Minuteman III, was completed in the mid 1970s. The Soviet Union, in contrast, has deployed some 850 of the world's most modern operational ICBMs since that time. These missiles include the SS-17, SS-18 and SS-19, and all are equipped with multiple, independently targetable reentry vehicles (MIRVs). The Soviets' most recent edition is the single warhead, road-mobile SS-25. All of these newer Soviet missiles have excellent accuracy and payload potential, and about 800 are maintained in improved silos designed to reduce their vulnerability to our currently operational ICBMs. Even with these recent deployments, the pace of Soviet ICBM modernization shows no sign of slackening. In fact, a new dimension is being added, as mobile ICBMs join their existing force structure.

While the Soviets continue to rely heavily on fixed silo-based missiles, mobile ICBMs will soon be deployed in large numbers. The road-mobile SS-25 will soon be joined by the rail-mobile SS-X-24, which is expected to be operational in 1987. In addition to these, three new ICBMs are expected to enter flight testing in the next four years. These trends toward deployment, hardening and mobility only further add to the imbalance in relative capability between US and Soviet land-based missile forces.

In the area of submarine-launched ballistic missiles (SLBMs), the Soviets maintain an extensive modernization program designed to replace their entire MIRVed force. This also includes deployment of new and improved nuclear-powered ballistic missile submarines (SSBNs).

The Soviet SSBN force, the world's largest, consists of over 60 modernized submarines armed with about 950 ballistic missiles carrying about 2,600 warheads. Two-thirds of this submarine force carries missiles that can reach targets in the United States from Soviet home waters. The Soviet ballistic missile submarine program has been vigorous, four times larger than the US production rate in recent years. They continue to deploy new DELTA IV and TYPHOON Class SSBNs, with an advanced class expected to be deployed in the early 1990s. The TYPHOON carries 20 new SS-N-20 MIRVed missiles. These missiles are much more accurate than any previous Soviet SLBMs. The DELTA IV and DELTA III Class submarines carry the older SS-N-18 MIRVed system; however, flight tests and possible deployment of a new replacement missile, the SS-NX-23, have started. This missile will provide increased range and accuracy over the SS-N-18. Additionally, a replacement for the SS-N-20 will probably be tested later this year, along with another missile in the SS-NX-23 class.

Two Soviet sea-based land attack cruise missiles, the SS-NX-21 and SS-NX-24, are also approaching operational status. The SS-NX-21, with a maximum range of 1,600 nautical miles, is small enough to be fired from a standard Soviet torpedo tube. Candidate launch platforms include the AKULA, MIKE, SIERRA, VICTOR III AND YANKEE class SSN attack submarines. The larger SS-NX-24 cruise missile could be operational within two years. Both missiles have nuclear warheads and will be capable of destroying hardened targets.

The strategic manned bomber component of Soviet offensive forces is increasing both in quantity and quality. A new variant of the BEAR bomber, the BEAR H, has been deployed and carries the first Soviet long-range land attack air-launched cruise missile (ALCM), the AS-15. In addition, a new long-range bomber, the BLACKJACK A, is being flight tested and could be operational as early as 1988. This bomber, similar to but larger than the US B-1, will be capable of carrying several payloads, including the AS-15 cruise missile. Also, the Soviets continue to build about 30 BACKFIRE bombers a year. This bomber is nearly the same size as the B-1 and could be used in a strategic role.

Soviet strategic air defenses are extensive, consisting of a dense, nationwide air defense network designed to counter air breathing forces and a ballistic missile defense capability near Moscow. Both are being modernized.

By continuing deployment of the SA-10, the Soviets are improving their surface-to-air missile (SAM) defenses, which already include nearly 14,000 launchers. This air defense missile is designed to counter low flying aircraft and will have some capability against current cruise missiles. Also in development is a newer mobile air defense missile system, the SA-X-12, which may have the potential to intercept US strategic ballistic missiles, as well.

The upgrades to anti-ballistic missile defenses around Moscow, when complete, will include long-range modified GALOSH missiles designed to engage targets outside the atmosphere and nearly 100 silos, most of which will likely house high acceleration missiles for destroying targets within the atmosphere. To control the engagements, the

Soviets are building a large, phased-array radar at Pushkino. This ABM system will reach full operational status in the late 1980s. In addition, the new radar under construction at Krasnoyarsk not only could provide a basis for a territorial ABM defense capability but constitutes a violation of the ABM treaty. We are concerned that if the Soviets continue to develop engagement and guidance radars as well as above-ground launchers for high-acceleration interceptors, they could use them for a rapidly deployable ABM network in violation of the ABM Treaty.

In the fighter aircraft arena, the Soviets continue to deploy the MIG-31/FOXHOUND A, the first true look-down/shoot-down aircraft in the Soviet inventory. This aircraft has been joined by the MIG 29/FULCRUM A and SU-27/FLANKER B, similiar to our F-16 and F-15 respectively. Both have the MIG-31's look-down/shoot-down capability.

In summary, the Soviets are spending vast sums of money in both their strategic offensive and defensive force structure. If the Triad concept is to remain viable, we must continue our efforts to modernize.

US Strategic Triad

Our Triad of ICBMs, submarine-launched ballistic missiles and bombers is intended to deter a Soviet attack and complicate Soviet attempts to defend against a mixed retaliatory force, should deterrence fail. The three legs of this Triad are mutually reinforcing and compensating. The ICBM force's high daily alert rates and accurate, quick response capability provide the unique ability to put time-urgent, hardened Soviet warfighting assets at risk. The submarine force of SLBMs provides a capable system that is survivable, mobile and presently difficult to detect. The strategic bomber force provides the most versatile, flexible element, with its ability to be recalled, redirected and reconstituted. In concert, the widely diverse legs of the Triad make it highly unlikely an adversary will be able to successfully attack or totally neutralize our retaliatory capability. This Triad deters because it ensures our forces can respond to an attack by launching a credible counterattack. It also gives us maximum flexibility in employing our forces and provides a hedge against a technological breakthrough directed toward any one leg.

The Triad concept has successfully weathered the march of technology and the test of time for a quarter century. The Air Force has made major contributions to the continued viability of the concept through modernization efforts of our two components: land-based ICBMs and manned bombers. These efforts must continue. As the President's Commission on Strategic Forces, or Scowcroft Commission, concluded, in order "to pursue successfully a policy of deterrence and verifiable, stabilizing arms control, we must have a strong and militarily effective nuclear deterrent. Consequently our strategic forces must be modernized."

Only with credible strategic forces can we convince our adversaries they cannot achieve their war aims without suffering unacceptable losses, if they engage in conflict. Concentrated efforts over the past few years have begun to reverse the decline in strategic force effectiveness and flexibility. These efforts must continue. Modernization is essential to the future ability of the Triad to act as a credible deterrent and will improve stability by increasing the certainty in the minds of the Soviets that any aggression they may contemplate will result in an effective and decisive response.

ICBM Modernization

ICBMs are an essential deterrent element of our strategic Triad and have unique features not found totally in bombers or SLBMs. These qualities include: low operating cost; high alert rates; rapid response capabilities; redundant and high confidence command, control and communications; highly responsive retargeting flexibility; and excellent accuracy for prompt hard target destruction capability.

Missiles with improved capabilities are needed to improve this nation's deterrence capability, remove the Soviet advantage in ICBM capabilities, and ensure that a strike against our land-based ballistic missiles would not prevent us from retaliating effectively. To address these needs, the US has embarked on an ICBM modernization program reflecting the recommendations of the President's Commission on Strategic Forces; i.e., prompt deployment of 100 Peacekeepers; development of a small, single warhead ICBM; and a basing technology development program.

Peacekeeper. The Peacekeeper is a four-stage ICBM which carries up to ten independently targetable warheads with much greater accuracy than the current systems. The Scowcroft Commission recommended deploying 100 Peacekeeper missiles in existing Minuteman silos to counter the Soviets' massive ability to destroy hardened land-based targets, to demonstrate US national will and provide incentives for arms control. The 1986 Defense Authorization Act approves deployment of 50 Peacekeeper missiles in existing Minuteman silos. It also provides that deployments of additional Peacekeeper missiles are subject to Congressional approval of a more survivable basing mode. Current plans call for the first 50 missiles to replace an equal number of Minuteman missiles deployed in silos near F.E. Warren AFB, Wyoming. Other basing options are being studied for the remaining deployment, with eight candidate basing modes under consideration. These options include: shallow tunnel (hardened trench), hardened Minuteman silos, super hard silos, super hard silos with mobile transport, mobile encapsulated (carry hard), rail-mobile, ground-mobile and deep underground basing. We remain convinced that deployment of 100 Peacekeeper missiles is the most prudent option to ensure continued effective deterrence and stability.

Peacekeeper is in full scale development. Ten of the 20 planned research and development flight tests are complete, resulting in outstanding accuracy and functional performance. Production is underway, and first delivery is scheduled for May 1986. Initial operational capability of ten missiles is planned for December 1986. Total program acquisition cost, adjusted for 50 missiles, is $14.5 billion (FY 82 dollars). Our FY 87 budget funding will be used to procure test missiles ($1.418 billion), conduct testing and evaluation ($331.8 million), construct support facilities ($27.5 million) and examine alternate basing modes ($390 million).

As stated in the Scowcroft report "...deployment of MX is essential in order to remove the Soviet advantage in ICBM capability and to help deter the threat of conventional or limited nuclear attacks on the alliance. Such deployment is also necessary to encourage the Soviets to move toward the more stable regime of deployments and arms control...." In March 1985, the President's "Report on Continuing the Acquisition of Peacekeeper (MX) Missile" again concluded that the continued procurement of the 100 Peacekeepers was essential to national security and reaffirmed the validity of the Scowcroft Commission recommendations. In line with these recommendations we will continue to seek greater deterrence stability through deployment of Peacekeeper; development of the small, single warhead ICBM and vigorous pursuit of mutually verifiable arms reduction agreements.

Small ICBM. While Peacekeeper promotes greater stability by addressing present force imbalances and demonstrating resolve, the Small ICBM (SICBM) supports stability objectives by decreasing individual strategic target value and by increasing the survivability of our land-based ICBM leg of the Triad. Its light weight, about 15 tons, one-seventh that of the Peacekeeper, makes the SICBM compatible with a broader range of basing modes, including mobile options. This missile will further confound attempts by the Soviets to simultaneously attack all parts of our strategic forces and will increase their uncertainty that they can successfully achieve their war aims without fear of a quick, effective counterattack.

The US remains committed to the President's objective to reduce missile warhead numbers and improve nuclear stability. The SICBM program supports these objectives in several ways. First, the SICBM's single warhead design is a move away from MIRVed systems. This reduces its target value compared to that of other nuclear delivery systems. Second, the missile will be compatible with a wide range of more survivable basing modes, thereby complicating the Soviet war planners' targeting problems. In short, the SICBM will reduce the Soviet's attack payoff and require large expenditures of enemy weapons if an attempt is made to destroy our SICBMs, with high confidence levels. The improved capability of the SICBM, combined with its one warhead design, will provide increased incentives for the Soviets to negotiate warhead reductions and force restructuring in Geneva.

The Air Force has completed the concept definition phase of SICBM development. All contracts have been awarded for the most promising SICBM design of the pre-full scale development phase now being studied. In addition, we are continuing research on hardened road-mobile launchers (HML's) since that mode appears particularly viable. Preliminary HML concepts and shapes have been evaluated, and wind tunnel and blast tube tests have been conducted. Two full size pre-prototype vehicles have been manufactured for mobility testing under near actual operational conditions. The key challenge is to provide sufficient hardness without severely restricting mobility. Work is also continuing in order to develop and test hard-silo technology and limited deep basing.

Depending on how relevant small missile technologies and basing modes evolve, the small missile should enter full scale development in late 1986, its first flight occurring in 1989, leading to an initial operational capability by December 1992. The FY 87 budget request asks for $1.375 billion for continued R&D on the SICBM program, a program the Department of Defense Authorization Act 1986 Conference Report called "well conceived and executed."

ICBM Technologies. The Air Force continues research and development on ICBM basing technologies including deep-underground basing, silo hardening and mobile concepts. Additionally, our exploration into technological areas, such as maneuvering reentry vehicles (MaRVs) and penetration aids, will offset future Soviet advancements in ballistic missile defense.

The FY 86 Authorization set money aside for hard silo and other basing technology R&D efforts. Testing to date by the Air Force and the Defense Nuclear Agency in the hard silo area indicates silos can be hardened to withstand nuclear effects nearly 40 times greater than that of current silos. The Air Force is encouraged by these results and believes silo hardening is one very promising option for future ICBM deployment. Other basing technology efforts continue, through the FY 87 budget's support of continued research.

In the Advanced Strategic Missile System area, FY 87 funds ($176.9 million) are directed toward advanced development of a penetration aid system for Peacekeeper and the SICBM. This R&D is aimed at countering ongoing upgrades to Soviet ABM capabilities and acts as a hedge against possible Soviet abrogation of the ABM Treaty. US research efforts have increased in importance in light of Soviet advances in ballistic missile defense and their deployment of a new ABM network in the Moscow area. This research supports a rapid, full scale development program and deployment of penetration aids to ensure our reentry vehicles (RVs) can penetrate the upgraded Soviet ABM defenses.

Maneuvering reentry vehicle (MaRV) development will provide ballistic missile warheads with an improved ability to penetrate Soviet defenses. A MaRV is a reentry vehicle that can perform evasive maneuvers to elude defensive systems and attack its designated target with a high degree of accuracy. This penetration technique is particularly effective against both a potential Soviet nationwide ballistic missile defense (BMD) system and ongoing upgrades to the existing Moscow defenses. The Air Force is pursuing MaRV technologies as a counter to potential Soviet "breakout" of the ABM treaty and their advances in ABM technology. MaRV capability would give us an effective retaliatory capability in the face of potential Soviet BMD efforts and help the United States maintain a strong ICBM deterrent into the foreseeable future.

Minuteman. The aging Minuteman force requires increasing resources to ensure its continued reliability and effectiveness, even though it is the least expensive Triad system to operate and support. Elements of the force are now over 23 years old and under present planning will remain a key element of the US strategic deterrent posture for the foreseeable future. Even with Peacekeeper deployment, Minuteman forces are critical resources in addressing the massive Soviet advantages in ICBMs. Minuteman continues to be effective against many targets. Accuracy improvements and the recent MK 12A warhead deployment program are geared toward keeping Minuteman as an important element of the Triad for the forseeable future.

To maintain and improve Minuteman reliability, supportability and effectiveness, we are modifying and refurbishing the force. These changes include new C^3 systems; accuracy improvement programs; a better emergency power source; a penetration aids upgrade; and repair of booster motors, missile guidance sets and ground facilities. The total FY 87 request for this system, including O&M and Military Personnel, is $810.6 million.

Bomber Modernization

The manned bomber remains the most flexible element of the Triad. It can be recalled or redirected after launch, make real-time damage assessments during an attack and can be reconstituted for follow-on missions. Even with the responsiveness of Soviet ballistic missiles, the manned bomber's launch capability ensures system survivability and serves as a viable deterrent threat. The bomber's ability to carry a large number of weapons, attack widely separated targets, and engage alternate targets by using aircrew and aircraft sensors to determine target location in both nuclear and conventional roles, provides the capability for measured response and flexibility. With the increased Soviet emphasis on mobile ICBM delivery systems and command centers, the manned bomber's real-time potential for locating and destroying relocatable systems is vital to the maintenance of a viable Triad. A force of penetrating bombers, employing a mix of gravity bombs, short-range attack missiles and cruise missiles, imposes a demanding burden on Soviet defensive systems and precludes optimization of defensive forces against any single mode of attack.

The Bomber Modernization Program is designed to counter current and projected Soviet defense improvements. President Reagan chose the B-1B to provide a near-term replacement for the B-52 in the penetrating bomber role. The modernization plan calls for acquiring 100 B-1B aircraft with an initial operational capability later this year. The President also directed the Air Force to pursue development of the Advanced Technology Bomber (ATB) for deployment in the 1990s, ensuring a manned penetration capability well into the 21st century.

The B-1B and ATB are integral parts of the Air Force's strategic modernization program. Each has an essential role in a time-phased effort which will ensure we continue to place a wide range of Soviet targets at risk with our bomber systems. Once the ATB enters the inventory, B-1Bs can begin to assume a mixed role as cruise missile carrier and penetrator. In the 1990s, a combined force of B-1Bs, ATBs and B-52s with cruise missiles will place maximum stress on Soviet air defenses and provide the US with a flexible and highly capable nuclear and conventional deterrent.

B-1B. The 1981 Defense Authorization Act directed the Secretary of Defense to pursue full scale development of a multi-role bomber capable of performing both nuclear and conventional delivery missions. The B-1B aircraft was designed to meet this task.

This aircraft's primary mission is in the nuclear delivery role, revitalizing the manned bomber leg of the Triad. A combination of high-speed, low-altitude tactics; sophisticated electronic countermeasures; and low radar cross-section will make the B-1B a highly effective penetrator well into the 1990s. In the conventional arena, it will have the range and payload capability to provide world-wide power projection. Finally, as the ATB enters the bomber force, the B-1B will gradually assume a mixed role as cruise missile carrier and penetrator.

The B-1B program has been a major acquisition success story by remaining ahead of schedule and within the certified $20.5 billion (FY 81 $) cost ceiling. In June 1985, SAC took delivery of its first operational B-1B, and in August, the Air Force awarded the remaining multi-year procurement contracts to three of its associate contractors.

During enactment of the FY 86 budget, the B-1B program suffered a reduction of over $700 million. The B-1B program is currently funded $1 billion below the certified cost ceiling of $20.5 billion (FY 81$). These large reductions, considered premature and risky by the Air Force, could result in future requests for supplemental funding.

The FY 87 program ($118.7 million) funds additional development and demonstration of the aircraft's operational capability. Flight testing will focus on cruise missile and common strategic rotary launcher integration; radar cross section measurement; electromagnetic interference compatibility; and heavy-weight, low-level, terrain following.

Advanced Technology Bomber. The Advanced Technology Bomber (ATB) is a long-range strategic bomber that will incorporate low-observable technology to enhance its ability to penetrate enemy defenses. The ATB R&D program is proceeding on schedule at a fast, yet prudent pace. When delivered in the early 1990s, the ATB will provide high confidence that our manned bombers will be able to penetrate Soviet defenses well into the next century. It will also provide the flexibility and other unique military characteristics that only a manned strategic aircraft possesses; e.g., recallable, usable in conventional or nuclear roles, and potentially capable against mobile or strategic relocatable targets. Although most details of the ATB program are highly classified and cannot be disclosed, the aircraft will be designed using low-observable techniques to negate or minimize the effects of present and projected Soviet air defenses. The technologies involved represent a major technological advance even though still in the developmental stages.

B-52. The B-52 has been the backbone of the manned bomber leg of America's strategic Triad for more than a quarter century and will continue to play a significant role in our nuclear force structure as the B-1B and ATB come into the active inventory. Additionally, the B-52's conventional role continues to grow in importance. In conventional scenarios, the B-52's long-range, rapid response and large, diversified payload characteristics provide a vital world-wide capability not found in any other present day weapon system.

Evolving world-wide air defensive threats, however, require the B-52 to have the capability to use standoff tactics when employing conventional weapons against land and sea targets. The principal advantage of this capability is the flexibility to put high value enemy targets at risk, regardless of the threat environment. Thirty of the 69 non-ALCM B-52Gs are modified for a standoff anti-ship mission using the Air Force and Navy-procured Harpoon missile. All 69 aircraft will participate in the full range of conventional operations, including a standoff land attack option, and will be dedicated to the conventional mission by 1989. The immediate response, global range and large payload capability of these aircraft make them excellent platforms for standoff weapons employment.

The Air Force is responsible for developing and maintaining the tactics and capabilities to use strategic aerospace forces to support the Navy in a wide variety of maritime collateral functions, including: interdiction of enemy sea power, antisubmarine warfare, protection of shipping and aerial mine laying operations. A memorandum of agreement between the Navy and the Air Force has set forth the responsibilities of both Services in employing the B-52 for anti-surface, sea surveillance, reconnaissance and mine laying operations. Once again, the bomber's inherent characteristics of rapid response, long range and extended loiter time, coupled with other mission capabilities unique to the B-52, make it an ideal platform for support of maritime operations.

Major modification emphasis to date has been to add the Offensive Avionics System (OAS) and Cruise Missile Integration (CMI) (external ALCM carriage) to the B-52G/Hs. The OAS, a digital avionics system, replaces a 1950's technology analog bombing/navigation system suffering from low reliability and high support costs. Over seventy-five percent of the B-52 fleet has been modified with OAS. Ninety-eight B-52Gs and 11 of 96 B-52Hs have been modified to date with an external ALCM carriage capability. Completion is scheduled for FY 90.

Other system improvements budgeted for FY 87 include electronic countermeasures ($187.9 million), common strategic rotary launcher ($100 million), integrated conventional stores management system ($34.7 million), radar ($74.7 million), and other updates to meet the expanding enemy threat environment and improve effectiveness.

FB-111. The all weather, day/night capable FB-111A fleet is also a key element of our strategic forces. Although it now has a nuclear mission, the FB-111A also retains a conventional weapons capability. Considering the dual capabilities of the FB-111A, our plan is to transfer these aircraft to the tactical forces as the ATB enters the active inventory in the early 1990s. However, regardless of when a transfer occurs, the FB-111s require modernization for reliability and economic maintainability. Since all five models in the F/FB/EF-111 family are similar in design, many modifications will be common to the entire fleet.

The FY 87 budget requests $10.7 million for several modifications on FB aircraft, including avionics modernization and electronic countermeasure dispensers. We also request funds for avionics intermediate shops (AIS) to replace the current unreliable and costly test stations. The avionics modernization program (AMP) and the AIS program will significantly expand the capabilities of the force.

Air-Launched Cruise Missile (ALCM)/Advanced Cruise Missile (ACM). The cruise missile is an effective weapon for attacking preplanned, fixed strategic targets. An accurate and survivable long-range weapon, the cruise missile increases bomber targeting and routing flexibility and reduces the exposure of our bombers to present and projected air defense threats. B-52Gs, equipped with 12 external ALCMs each, are now operational. By July there will be eight operational squadrons equipped with cruise missiles. Our objective remains to improve the survivability, range and accuracy of the ALCM to respond to the projected Soviet threat.

The advanced cruise missile, a Presidentially-approved, Secretary of Defense-directed second generation cruise missile, is currently under development as a logical and timely update to our current force. Technological improvements in the ACM signature level, range, accuracy and targeting flexibility will enhance the long-term effectiveness of our airbreathing force. A competitive source selection was concluded in April 1983, and the full scale development contract for the ACM was awarded. The ACM will join the current generation ALCM as a deployed system on current as well as future aircraft.

Short-Range Attack Missile II (SRAM II). The SRAM II will give the B-1B and Advanced Technology Bomber a modern Short-Range Attack Missile (SRAM). The SRAM, a supersonic air-to-ground nuclear weapon, provides a short range standoff capability to the delivery aircraft. This system provides not only a rapid targeting flexibility but is highly effective against Soviet defenses. The SRAM II will address the current problems of declining inventories, reliability concerns of the aging rocket motors and the need to upgrade the SRAM warhead with the most modern safety features. Additionally, the increased range and accuracy improvements of the SRAM II will provide increased capabilities against mobile and hard targets.

The SRAM II program is designed and structured to provide an up-to-date weapon, based on more than a decade of operational experience with SRAM. By using existing technology, we can make significant performance improvements without introducing unacceptable technical risk into the program.

Our SRAM II acquisition strategy emphasizes competition and also incorporates advances in low observable technology, navigation systems, propulsion efficiency and system accuracy. SRAM II will make the penetrating bomber more flexible by giving it a weapon system that can strike many targets from standoff ranges. Flight tests are planned to begin in mid FY 89, with an initial operational capability in FY 92. The FY 87 budget request for $164.7 million in developmental funds will ensure this program proceeds at an efficient rate.

Strategic Command, Control and Communications (C^3)

The credibility of the US strategic deterrent depends on C^3 systems that provide positive control for the effective employment of the Triad. These systems link the National Command Authorities (NCA) to senior force commanders and command centers. They also link our tactical warning, defensive forces and strategic retaliatory forces to our command centers and to each other. In short, these systems ensure that our national policies and defensive strategy are executed promptly and correctly.

US C^3 systems require speed, flexibility, reliability and survivability to ensure usefulness before, during and after a nuclear attack. They also must function in concert with our general purpose forces. Our command, control and communications systems should provide high confidence, unambiguous, timely attack warning and attack assessment information to the NCA.

In the past, we have not modernized our C^3 systems fast enough to counter the Soviet threat. Consequently, upgrading our C^3 systems is now the highest priority of our Strategic Modernization Program. Our objective is to make sure these systems are as robust as the forces they support. Systems like the Ground Wave Emergency Network (GWEN) and the Milstar satellite communication system will give us an EMP-resistant way to alert and activate our nuclear retaliatory forces.

Installing GWEN and satellite terminals, coupled with base command post hardening, will improve strategic connectivity. In the continental US, GWEN will greatly reduce jamming threats and the effects of high altitude nuclear bursts. Milstar will further extend this resistance to jamming and nuclear effects and provide world-wide connectivity. We are requesting $162.7 million in FY 87 to continue the conceptual/development phase and procurement of GWEN. An interim GWEN capability will be completed in 1986 with full operational capability in 1992.

Milstar will use extremely high frequency (EHF) transmissions to provide worldwide, anti-jam, survivable communications before, during and after a nuclear attack. By the early 1990's, Milstar will complement the Air Force Satellite Communications (AFSATCOM) system and Navy Fleet Satellite Communications (FLTSATCOM) system by assuming communications missions which require enduring jam-resistance, hardness and survivability. Our FY 87 funding request of $791.8 million will allow us to continue full scale development of the Milstar program and upgrade the AFSATCOM system.

Other C^3 improvements include improving the coverage of worldwide high frequency (HF) radio stations, fielding a mobile command center for strategic operations, and modernizing the Worldwide Military Command and Control System's standard automatic data processing component. In addition, the E-4B National Emergency Airborne Command Post is being upgraded to make it more capable, survivable and reliable so the NCA can more effectively command and control our strategic forces.

Strategic Defense

Strategic defense must provide our National Command Authorities with the capability to posture forces for survival, limit damage from atmospheric attacks and respond appropriately to an attack on the United States. Over the past two decades, the Soviet Union has pursued substantial growth in strategic offensive capability. At the same time, the US strategic defensive programs were less comprehensive and focused primarily on surveillance, warning and aircraft modernization. The sustained Soviet improvement, modernization and growth in offensive weaponry dictates corresponding improvements in US strategic defenses.

For the past two decades, the Soviets have sought superior capabilities with which to fight and win a nuclear war. They have improved all aspects of their strategic offensive forces, with more than 30 new strategic offensive systems in various stages of development. Recently the Soviets deployed their newest ICBM, the SS-25, and we expect them to deploy the larger SS-X-24 in 1986. Their air-breathing threat has also grown with the deployment of the BEAR H and expected deployment of the new BLACKJACK A intercontinental bomber. Both bombers will deliver AS-15 long-range cruise missiles.

We have reexamined strategic defense and are building the forces required to achieve a more stable deterrent. To that end, we are modernizing our continental air defense forces and continuing to test our antisatellite (ASAT) space defense system within congressional guidelines. We are also exploring, in consonance with the President's Strategic Defense Initiative, several new technologies that could provide a comprehensive strategic defense by the turn of the century, if these technologies prove feasible and future administrations decide to proceed with the deployment of operational systems. Finally, the Air Force strongly supports negotiations aimed at arms reduction agreements which, along with force modernization, improve our national security.

Tactical Warning/Attack Assessment, Air Defense. The North American Air Defense Master Plan (ADMP) addresses our requirements and force structure for tactical warning, attack assessment, damage limiting response and airspace control. We consulted our Canadian defense counterparts throughout the development of this plan and signed a Memorandum of Understanding for cost and responsibility sharing for various components of the plan. The ADMP recommended two major strategic defense improvements: first, improving our day-to-day warning and attack assessment capability with Over-the-Horizon-Backscatter (OTH-B) radars and the North Warning System (NWS), a system of state-of-the-art ground-based microwave radars, and second, improving intercept capability, attack assessment and active defense by updating our air defense squadrons with modern interceptor aircraft.

Our current ballistic missile tactical warning and attack assessment is provided by space-based systems; three Ballistic Missile Early Warning System (BMEWS) sites; the Perimeter Acquisition Radar Attack Characterization System radar near Grand Forks AFB, North Dakota; the Eglin AFB, Florida, AN/FPS-85 radar; the MacDill AFB, Florida, AN/FSS-7 SLBM radar; and two PAVE PAWS submarine-launched ballistic missile (SLBM) phased-array detection and warning radars, located at Otis Air National Guard Base, Massachusetts, and at Beale AFB, California. Information from these sensors is provided to the NCA via strategic communications systems and command centers throughout the continental United States.

Atmospheric defense of North America has long been a cooperative Canadian-US effort, with surveillance and warning systems configured to control access to North American airspace. The surveillance system is composed of ground-based radars in the Distant Early Warning (DEW) line, the CADIN-Pinetree system in southern Canada, and the Joint Surveillance System (Federal Aviation Administration and military joint-use radars in Alaska and the continental United States).

Air Defense Interceptor Modernization. Fighter interceptor aircraft assigned to atmospheric defense include F-15s, F-4s and F-106s. The responsibility for the mission is shared by active and Air National Guard units, with the Guard now manning 11 of the 14 dedicated air defense squadrons.

We must modernize our interceptor force to counter the increasingly capable air-breathing threat to North America. The Soviets are increasing the number of cruise missiles carried by their strategic bombers and submarines. They are also developing a modern long-range penetrating bomber. To combat these threats, we need long-range interceptors with a large search volume radar and look-down/shoot-down capability. The F-15 satisfies these requirements but, because of fiscal constraints, limited F-15s are available for interceptor squadrons. Units not receiving the F-15 will be equipped with F-16 A/B aircraft or another modern interceptor determined by competition. Canada is also upgrading its air defense interceptor force with CF-18 aircraft.

Air Defense Competition. The congressionally mandated air defense fighter competition is closely related to the modernization of our air interceptor force. The Air Force is arranging this competition, open to all interested firms, with final contractor selection planned for October 1986. The winner will supply as many as 300 aircraft.

OTH-B. To extend coastal surveillance coverage beyond the limit of the Joint Surveillance System radar, we are building long-range Over-the-Horizon Backscatter (OTH-B) radars on the East and West coasts. Planned extension of the OTH-B includes a central US and an Alaskan OTH-B. These radars will cover all altitudes and give early warning of hostile intruders out to approximately 1,800 miles. We are requesting $233.9 million in FY 87 for further development and procurement of the two additional OTH-B sectors needed to complete the west coast system.

NWS. The North Warning System (NWS) is replacing the Distant Early Warning Line and provides improved radar surveillance at reduced operations and maintenance costs. The NWS will also provide credible long-range, all altitude coverage to complement OTH-B surveillance. NWS' mission is to provide reliable, timely, tactical warning of bomber or cruise missile attack on North America. The system will consist of a total of 52 radar stations: thirteen long-range, minimally-attended radars and 39 short-range, unattended radars. The US is funding 60 percent of the acquisition cost, and the Canadians will fund the remaining 40 percent. Our FY 87 NWS funding request is $14.4 million. This money will continue development of two prototype short range radar stations and one logistics station.

PAVE PAWS. The deployment of the four-site PAVE PAWS SLBM detection and warning system is not yet complete. The Southeast site at Robins AFB, Georgia will be operational in November 1986 and the Southwest site near Goodfellow AFB, Texas in May 1987. Construction/installation at both sites is proceeding on schedule. We are requesting approximately $214 million in FY 87 to operate and maintain the sites at Otis ANGB, Massachusetts and Beale AFB, California; to complete the southern sites; and initiate upgrades at the Robins AFB and Beale AFB sites, which will expand coverage and ultimately permit closure of the warning radar site at Eglin AFB, Florida.

AWACS. The North American Air Defense Master Plan recommended additional procurement of the E-3A Airborne Warning and Control System (AWACS) to provide survivable command and control in wartime, and provide a system capable of detecting long-range bombers at altitudes and distances unobtainable with land-based radar. AWACS patrols can provide greater coverage of northern airspace until DEW line radars are replaced by NWS, and OTH-B is on line to extend current Joint Surveillance System coastal coverage. In addition to extending the DEW line coverage, AWACS provides the flexibility to deploy a survivable airborne surveillance and command, control and communication system anywhere within the North American continent. We recognize a need for greater numbers of AWACS to fulfill our sizable operational commitments; however, the production line is now essentially complete. Therefore, to meet our requirements we are asking for $137.2 million to enhance the present system and study low cost alternatives.

Canadian Contributions. Since 1957, Canada and the US have shared the burden of defending North America as joint members of the North American Aerospace Defense Command (NORAD). Though the majority of the burden falls on the American military, Canada is modernizing its forces and increasing its areas of responsibility. The most visible improvement is the Canadian Air Force's CF-18 for the air defense role. This aircraft is a great improvement over the older CF-104 and CF-101. However, the largest improvement is in the Canadian commitment to pay 40 percent of the estimated $1.3 billion cost to overhaul the outmoded Distant Early Warning radar line with the North Warning System (NWS). The Canadians are not only funding 40 percent of the total but also are contributing significantly to the support of the NWS. Other Canadian contributions include involvement in: forward operating locations/dispersed operating bases for fighter and AWACS operations, AWACS and OTH-B manning, and communications/radar station support and manning.

ASAT. The US antisatellite (ASAT) program responds to the threat posed by the operational Soviet ASAT system and operational Soviet reconnaissance and surveillance systems that provide information to Soviet combat forces. This Soviet threat has raised the prospect of a potential Soviet military advantage in space. An operational US ASAT capability will deter threats to space systems of the US and its allies and, within limits, deny the assured use of space-based systems by hostile military forces.

The ASAT is an air-launched antisatellite missile program consisting of a modified SRAM first stage, a modified ALTAIR second stage and a miniature homing vehicle warhead. The kill mechanism is hypervelocity impact. ASATs will be launched from designated air defense F-15s.

ASAT testing is fully consistent with the rights and obligations of the United States under the 1972 Anti-Ballistic Missile Treaty. The Air Force supports US commitment to negotiate a mutual and verifiable agreement with the Soviet Union for the strictest possible limitations on antisatellite weapons, consistent with US national security interests. However, a moratorium on antisatellite weapons testing would not be in our national interest at this time. It's important to note that no mention of an antisatellite moratorium was ever made by the Soviet Union until we entered the testing phase of our own ASAT program. By that time, the Soviets had completed 20 tests of their system and could consider that system operational. There is no reason for the US ASAT testing to affect arms negotiations, other than to provide additional incentives to the USSR to reach agreement on a wide range of issues. Failure to continue testing will reduce Soviet incentives to negotiate, provide them a sanctuary in space for their reconnaissance and targeting satellites, and impede us from obtaining the total benefit of our ASAT expenditures to date.

The Air Force is currently conducting a reevaluation of our FY 86 development and testing activities based upon the language contained in P.L. 99-190, the final Continuing Resolution for FY 86, prohibiting tests against an "object" in space without Presidential certification of a similar Soviet test.

Strategic Defense Initiative

For more than three decades, the US concept of deterrence has been based on the premise that conflict will be prevented, if the US maintains the capability to retaliate against any attack and impose costs on an aggressor costs clearly out of balance with any potential gains. Thus, offensive deterrence was not only sensible, but necessary, since we believed neither side would develop defensive forces that could effectively deter the other. We reinforced this strategy by restraint in the deployment of offensive forces and strict limits on defensive forces. Today, the situation is different. Trends in the development of Soviet strategic forces, both offensive and defensive, as well as the problems of Soviet deception and compliance with existing agreements, increasingly call into question the fundamental assumptions upon which our current strategy is based. Of equal importance, new technologies offer the possibility of defenses that did not exist before.

The Strategic Defense Initiative (SDI) is a research and technology program to determine the feasibility of developing effective defenses against ballistic missiles. The Air Force supports and is deeply involved in the SDI effort. The Strategic Defense Initiative Organization (SDIO) asked the Air Force to be its agent for the execution of 30-35 percent (approximately $500 million in FY 85) of the SDI program for the next few years. We receive funds and technical and programmatic guidance from the SDIO, develop execution plans, and carry them out. Our AFSC laboratories and two major product divisions (Electronic Systems Division and Space Division) will let contracts and manage programs on behalf of the SDIO. The Air Force is managing programs in directed energy; kinetic energy; surveillance and acquisition; battle management/command, control and communications; and survivability and lethality.

Specific SDI programs in the Air Force are: the Boost Phase Surveillance and Tracking System, the Space Surveillance and Tracking System, the Space-Based Kinetic Kill Vehicle, the Battle Management Test Facility, and the Ground-Based Laser. By working closely with the SDIO we can meet both far-term SDI objectives and nearer-term Air Force objectives.

Many of the SDI technologies can provide important spinoffs for Air Force mission areas and operations. The most critical near-term SDI programs for the Air Force are the Boost Phase Surveillance and Tracking System (BSTS) and the Space Surveillance and Tracking System (SSTS). The BSTS would provide missile early warning and the SSTS would provide space surveillance, both critical Air Force mission areas.

Work in the directed energy and kinetic energy areas of SDI may result in technologies that could also be applied to other Air Force programs. Other SDI research could offer spinoffs in automatic data processing, sensor technology, space structures and survivability.

This research will provide a future President and the Congress with the technical knowledge necessary to support a decision in the early 1990's on whether to develop and deploy advanced defense systems. The SDI will also provide the flexibility to respond to potential Soviet strategic defense developments. While the SDI focuses primarily on the ballistic missile threat, the Air Force is also examining requirements to counter bomber and cruise missile threats.

The SDI is one of the most important technological programs the nation has ever undertaken. It is not a deployment program, however, nor is it a substitute for our current arms control and reduction efforts or the modernization of our strategic nuclear, nonstrategic nuclear and conventional forces. SDI attempts to use America's greatest assets, creativity and ingenuity, to reduce the awesome threat of nuclear-armed ballistic missiles. The development and deployment of strategic defenses, if proven feasible, could significantly improve deterrence and increase stability for both the US and our allies.

Arms Reduction

Arms control and strategic modernization are mutually reinforcing elements of US national security. Both elements seek to enhance deterrence by achieving a more stable nuclear balance. The Air Force strongly supports efforts to reach agreements with the Soviet Union leading to equitable and verifiable arms reductions. We remain hopeful that US-Soviet negotiations on strategic and intermediate range nuclear forces can produce agreements which significantly reduce nuclear arsenals on both sides, contribute to security at reduced force levels, and help reduce the risk of nuclear war.

READINESS AND SUSTAINABILITY

Our military forces must be able to reach full combat potential under demanding, time-constrained circumstances. Should deterrence fail, warning time could be so short that peacetime readiness would be the deciding factor in determining success.

The Air Force's investment in force structure and modern weapon production can be translated into a warfighting capability only if readiness and sustainability programs are functioning well. Success in combat requires a balance of sufficient force structure, modern equipment, well trained people, effective repair facilities, sufficient spare parts, appropriate munitions and adequate fuel. Modern, ready forces form the basis of our capability to engage the enemy effectively on the first day of combat. Our readiness goal is to provide sufficient resources to enable our forces to fully perform those missions for which they were designed, procured, organized and trained.

Readiness, however, is not a one-time investment. Continued growth in readiness will be required to maintain and improve our readiness posture, as our force structure is increased, and its weaponry modernized. Since ours is fundamentally a defensive strategy, it is essential that we maintain our readiness at or above that of potential aggressors.

Sustainable forces, on the other hand, must have the "staying power" to fight during and beyond an initial period of combat. To do that, they depend on the nation's ability to provide adequate spares, supplies, munitions and fuel to replace those resources consumed in battle. Adequate sustainability results only when peacetime stocks, the support infrastructure, war reserve materiel and the industrial base can support the requirements of battle.

Building and maintaining readiness and sustainability is a continuing process, requiring a prudent balance among spending areas to achieve realistic goals. In our FY 87 budget submission, we have again placed a high priority on improving the combat readiness as well as the staying power of our forces. Although the pace is slowed, our FY 87 funding will enable us to continue increasing spare parts stocks and equipment inventories for our mobility and tactical forces. We will also continue to improve our inventory of modern munitions and train more effectively.

We have made progress in improving the quality and realism of operational training programs. Initiatives such as Red Flag and Dissimilar Air Combat Training continue to increase the readiness of our operational crews. Major exercises and numerous deployments of active, Guard and Reserve units to overseas operating bases have given operations and maintenance people realistic experience in the environment in which they might fight. This improved training, additional flying hours and more experience produced the best safety record we've ever had. In 1985, our accident rate was 1.49 mishaps per 100,000 flying hours. This flying safety record again reflects the positive effects on combat forces when readiness initiatives such as training flying hours, spare parts and realistic training are properly funded.

Operation and Maintenance

The Operation and Maintenance (O&M) account is crucial to the readiness and sustainability of the Air Force. This account represents 23 percent of the total FY 87 Air Force Budget Request. Approximately 80-85 percent of the O&M budget is fixed, in the sense that it goes toward funding our "must pay" bill that cannot be reduced significantly in the short-term. They include base structures, utilities, civilian pay, contract operations, base maintenance, contractor logistics support of weapon systems, dining halls, and the flying hour program. Therefore, unprogrammed dollar reductions must be absorbed by programs directly affecting today's readiness and sustainability. Examples include: deployments, Air Force-sponsored exercises, facility and equipment maintenance programs, and people programs; e.g., dormitory upgrades, appropriated fund support of morale, welfare and recreation activities.

The O&M account is directly program-related, but historically the account has absorbed such things as National Command Authorities taskings, unbudgeted rate increases, and Congressional directives. When these expenditures are substantial, much of the programmed growth in O&M is consumed to fund these unforecasted increases. The result is a degradation of the O&M accounts that support planned improvements in readiness and sustainability. Any change in a program should carry a commensurate change in O&M funding.

The O&M portion of the FY 87 budget is $24.1 billion, yielding about a 3 percent real growth over FY 86. This modest growth in the active force O&M is necessary for improved Air Force readiness, sustainability, and force structure support, largely driven by the following:

Space: Approximately $310 million funds increases for the Space Shuttle, including operation of the Vandenberg launch and landing site; upgrade of the Satellite Control Network; and opening of the Consolidated Space Operations Center.

Contractor Logistics Support: An increase of approximately $131 million is needed to support additional requirements of the SR-71, TR-1, GLCM and interim contractor support.

Depot Maintenance: This area experienced a decrease of $172 million due to budget constraints. This will result in an estimated $203 million backlog, primarily in component repair.

Real Property Maintenance: An increase of $53 million will help us recover from historically low funding levels and includes $38 million in contract facility maintenance. The Backlog of Maintenance and Repair (BMAR) decreases from $641 million at the end of FY 86, to $504 million at the end of FY 87. This is $204 million above the $300 million congressional containment level.

Civilian Personnel: Increases in strategic programs; logistics and procurement support; and medical and training result in real growth of $81 million.

Flying Hour Related Increases: Growth in O&M for flying hours is required to support increased force structure (F-16, B-1B, KC-135R). The dollar value of real growth in $51 million.

Other: There is also $40 million growth in information systems, half of which supports lease and subsequent purchase. European base maintenance increases $16 million; Air defense contracts increase $10 million; and Transportation increases $20 million. Growth within the Air National Guard and Air Force Reserve O&M accounts is tied to aircraft conversions under current modernization programs.

Readiness Training

Well-trained people are essential to maintaining a combat advantage. We need to train our crews and combat support people aggressively and realistically to make full use of their equipment and to sustain planned wartime sortie levels. The Air Force trains as we would fight, jointly with the other Services and our allies, so we can operate effectively together on the battlefield.

Exercises. Wartime experience has shown that a disproportionate number of combat losses occur during an aircrew's first ten combat missions. Exercises like Red Flag, Maple Flag and Cope Thunder are designed to give our crews the experience of those first ten missions in a training environment. However, in order for the Air Force to realize this benefit, these exercises must be realistic.

We continue our commitment to aggressive and realistic training. Our crews are training on weapon ranges against simulated enemy defenses, practicing with allied airmen and flying in the environment in which they would fight. As an example, Red Flag exercises give our crews peacetime experience in a realistic mock warfighting environment. During Red Flag exercises, our aircrews, including Guard and Reserve units, mobilize at their home base, deploy to Nellis AFB, Nevada, and stage operations out of airfields in the Nellis area. Crews fly against simulated enemy aircraft and ground-based defenses, and deliver live munitions on mock enemy targets.

Since we plan to fight as part of a combined, multi-service force, joint exercises with the other services are particularly valuable. Through the JCS exercise program, we gain considerable experience in deploying and employing forces under the joint operational command arrangement we would have in wartime.

Deployments. Our training programs include deploying active, Guard and Reserve units to overseas locations where they familiarize themselves with deployment bases, fly with our allies in multi-national exercises, and gain experience with local weather and terrain. These deployments continue to provide valuable, realistic training for our people.

Flying Hour Program. The Air Force Flying Hour Program is designed to meet aircrew requirements for a responsive and ready force, and we we have consistently flown to within 1 to 2 percent of our program. Of particular significance is the continued incremental flying hour growth in the tactical fighter program. Starting in the early 1980s, we have increased fighter flying hours each year to accommodate both force structure growth (more aircraft and crews) and readiness growth (the amount of time we fly each crew member).

The total FY 87 program, including the Air Reserve Forces (ARF) is 3.56 million hours, up approximately 1,300 hours from FY 86. This represents less than a .1 percent overall growth. The major portion of the flying hour increases are a result of force structure changes.

The overall impact of not receiving the requested level of funding to support our Flying Hour Program would be a reduction in our readiness and force projection capability. Specific impacts depend on the individual program and magnitude of the reduction. In Strategic Forces, B-52 contingency training for conventional and maritime operations would be reduced. The KC-135 program, already programmed at only 85 percent of user requirements, would be limited even further. Reductions would create more serious air refueling (AR) training shortfalls and diminish AR support for operational taskings in MAC and SAC as well as the Air Force, Navy and Marine General Purpose Forces. This would impact the readiness of many Air Force weapon systems. In General Purpose Forces, most of the growth programmed in FY 87 is for the increased number of aircraft and crews. Reducing the number of flying hours would actually decrease aircrew Graduated Combat Capability (GCC) level training by spreading the reduced hours over a greater number of crews. In airlift, reducing the program would reduce training levels and the force projection capability which directly impacts the combat readiness of US and Allied fighting forces.

T-37 Improvement/Replacement. The current Air Force primary trainer is the 30-year-old T-37B. Aircraft losses and foreign military sales have reduced its attrition reserve. Recognized operational deficiencies and safety concerns led to the validation of a Mission Element Need Statement in June 1979 to replace the T-37. Deficiencies include traffic pattern single engine performance, ejection envelope, lack of cockpit pressurization and limited weather capability.

To meet the requirements for a suitable training aircraft and overcome the deficiencies of the T-37, the Air Force originally planned to procure the T-46. Primarily due to fiscal constraints which caused reductions in several Air Force programs, it was necessary to cancel the FY 87 request for the T-46. Alternatives to address training aircraft deficiencies are currently under review.

Simulators and Training Devices. Combat aircrew proficiency is the ultimate force multiplier. It requires realistic training in a total systems environment, including both the weapon system and a family of training devices and training aids. Through the use of simulators and training devices, we are able to complement our highly valued flight time, enhance combat capability and, at the same time, improve safety.

The nation's investment in modern simulators results in increased mission readiness through more efficient and effective training. Training devices are used to develop warfighting skills not easily practiced in the aircraft because of equipment and weather limitations as well as airspace restrictions. We also use our ground based devices to train safety-of-flight tasks and emergency procedures requiring flight conditions either difficult to achieve or not prudent to accomplish in the aircraft. Practicing these tasks in training devices makes our flight time more effective, more efficient and provides us with crews better prepared to defend our nation.

We currently have simulators for most weapon systems, including the F-4, F-111, F-15, F-16 and A-10 fighter aircraft; C-5, C-141 and C-130 transports; KC-135 and KC-10 tankers; T-37 and T-38 trainers; B-52 bomber and E-3A Airborne Warning and Control System. Introduction of new aircraft; technological improvements, such as visual systems; and logistical requirements, such as conversion from analog to digital technology, mandate a need to continue upgrading simulators and training devices.

In FY 86, we fielded our first C-5/C-141 Aerial Refueling Part Task Trainer, a B-1B Cockpit Familiarization Trainer, and our first EF-111 Operational Flight Trainer (OFT). We started refurbishment of our KC-135 OFTs that help us convert from analog to digital technology and also began development of a simulation capability for the Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN). Development continues in FY 86 on the F-15E Dual Role Fighter and the F-16C/D. These development activities will continue in FY 87.

Our FY 87 budget request will continue procurement of the F-15, F-16, B-1B, KC-135 and LANTIRN simulator systems. Extensive front end analysis will begin for the advanced technology bomber, the advanced tactical fighter and the C-17. In addition, development will continue to advance the simulation technologies necessary to complement our flight time and improve our combat aircrew proficiency.

Range Improvement Program. The $223.6 million requested for our Range Improvement Program will ensure that we attain the most cost effective use of our testing and training resources. The Range Improvement Program provides the threat simulators and training resources critical to making exercises such as Red Flag, Maple Flag and Cope Thunder realistic. Equally important, it will ensure that we have the modern facilities needed to adequately test our new developments under realistic conditions.

Training Munitions. The Training Munitions account is a core program vital to the readiness of the Air Force. It encompasses all peacetime munition expenditures (except missiles) by ground personnel and aircrews, of both active and Air Reserve Forces. The Red Flag ranges offer a unique opportunity to fly simulated combat missions in an extremely realistic setting. Extensive target complexes, dissimilar adversary aircraft, and ground threat simulators not only enhance training quality but provide an ideal environment for live weapons employment. In addition to the flying realism, aircrews and munitions specialists alike benefit from the exposure to actual combat weapons. Annually, we expend approximately 3,000 live weapons during Red Flag. The Red Flag goal is to have each crew participate in a live ordnance mission during each deployment. In addition, crews may have other opportunities to drop live ordnance, both at home ranges and during other deployments. Approximately 70 percent of our air-to-ground tactical aircrews have live munitions experience, but this varies greatly at squadron level depending on location and type aircraft. Recent cuts have reduced outyear funding to a level of zero real growth over the FYDP. This will limit support for increased requirements due to force structure growth. The FY 87 budget request for $344.5 million is essential to gain experience for new crews and maintain experience levels of combat ready crews in usage of the munitions they will have to deliver in time of crisis.

Logistics

Logistics consists of support equipment, spare parts, munitions, fuels, and other supplies as well as the maintenance needed at the outbreak of hostilities to sustain our combat forces until the industrial base can mobilize. Our logistics objectives reflect preparedness for a prolonged conventional conflict and the need for enough war reserves to sustain combat and win. The three major components of logistics sustainability are aircraft replenishment spares, munitions and aviation fuel.

Combat sustainability for the Air Force has improved significantly over the past few years. Unfortunately, building stockpiles of war reserve consumables and spare parts is a slow and expensive process. Due to long procurement lead times (18-36 months for munitions, approximately 2 years for spare parts, and 1-2 years for petroleum, oil and lubricants, depending on tank construction), our increased funding for sustainability does not show immediate results.

Aircraft Replenishment Spares. Aircraft replenishment spares are vital to peacetime readiness and wartime sustainability. Readiness spares support peacetime training for the combat mission while sustainability spares provide the ability to perform the wartime mission.

Aircraft replenishment spares are a unique commodity since they are not readily available outside of service stockpiles even in the event of war. In a national emergency, additional aircraft spare parts do not exist. These parts generally cannot be available for two or more years because of procurement leadtimes. This long lead is caused primarily by a relatively low defense industrial base, lack of trained and skilled people, reliance on scarce strategic materials, and the burden of supporting both old and new aircraft technologies.

The FY 87 Budget reflects the cumulative effects of reduced appropriations in FY 86 and fiscal guidance in FY 87. Our Budget requests $2.078 billion for Peacetime operating Stocks (POS) and $472 million for War Readiness Spares Kits/Base Level Self-Sufficiency Spares (WRSK/BLSS). This represents a decision to finance the Air Force Replenishment Spares account at 56 percent of our total FY 87 requirements. The Air Force is concerned over these reductions and is dedicated to achieving required levels of readiness and sustainability in FY 88.

Munitions. Providing top quality, lethal munitions to our forces, with emphasis on the air-to-air threat munitions, remains a high priority. However, previously programmed increases in procurement of modern air-to-ground munitions have been slowed and the outlook in the FYDP period does not reflect the significant growth originally planned. Quantities programmed will not necessarily support sustained dual source procurement; e.g., CBU-87 Combined Effects Munition. Nevertheless, our revised program consists of an integrated, balanced and steady acquisition strategy which will improve the total combat capability of the Air Force.

We are making steady gains in meeting our munitions requirements. In air-to-air munitions, we continue to procure AIM-9 missiles and AIM-7 missiles while higher quality missiles are being developed to upgrade the capability of our air-to-air forces. As the Advanced Medium Range Air-to-Air Missile (AMRAAM) is phased into production, we will ease the AIM-7 out of production. Our existing air-to-surface inventory permits us to fly 100 percent of projected wartime sorties with full weapons loads. However, many missions would be flown with less effective general purpose munitions. Although we do have large munitions stockpiles, many are general purpose bombs and cluster munitions or early, more limited guided weapons. To enhance our capability against critical surface targets, we are developing and procuring a new generation of highly effective weapons and are just beginning to see the new, efficient, lower cost-per-kill munitions entering the force.

Petroleum, Oil and Lubricants. The availability of petroleum stocks is a critical logistical support area in sustaining sortie generation. There are no substitutes or less preferred products for the required petroleum commodities. The five-year Air Force plan (FY 87-FY 91) will fill over six million barrels of on-base WRM storage capacity at specific beddown locations. Over the same period, we project that the Defense Logistics Agency (DLA) will allocate an additional five million barrels of new terminal storage to Air Force requirements. The Air Force program addresses storage problems at specific locations, while DLA pursues shortfalls from the larger theater perspective.

Prepositioning. The objective of our prepositioning program is to provide our combat troops with a ready supply of equipment and other resources needed for rapid response in the event of crisis. Prepositioned resources are balanced with follow-on resupply by airlift and sealift. To meet our objectives in the early days of conflict, we are storing equipment and supplies in Europe, Southwest Asia and the Pacific for deploying US forces. With major items of equipment prepositioned in the theater, we can concentrate on movement of troops and essential support equipment at the outbreak of the conflict.

Our FY 87 budget request of 3.91 billion allows us to continue building our preposition stocks to a level that will supply our combat forces with the resources needed to accomplish their mission of defending US interests in time of war.

The European Distribution System. The European Distribution System (EDS) is a logistics system designed to give greater combat readiness and sustainability to US Air Forces in Europe (USAFE) through in-theater stockage and lateral resupply of critical items. By using the EDS concept of support, critical spares will be transferred in 12 to 36 hours under intense combat conditions. The EDS consists of a dedicated command, control and communications system supporting Air Force logistics; a squadron of small cargo aircraft; and the stockage of wholesale spares in-theater. With 18 C-23A (Sherpa) aircraft in place at Zweibrucken AB, Germany for movement of material in USAFE, the transit time on delivery of parts has been reduced from as much as seven days to only one to four days. An average of 40 percent of USAFE mission-impaired requirements are being supported in-theater. RAF Kemble, United Kingdom was selected as the first forward stockage site for EDS. From January through December 1985, RAF Kemble shipped 15,749 items to USAFE bases of which 1,878 items satisfied mission-impaired requirements. Our FY 87 budget request includes $31 million to operate and maintain the system.

Air Base Survivability

The improving Soviet air, missile, chemical and conventional attack capabilities increase the vulnerability of our wartime operating bases. Theater air bases must have the ability to survive an enemy attack and still be able to generate combat sorties to ensure that airpower can be continuously and effectively employed.

Air Base Survivability is our effort to respond to that threat. It consists of complementary programs that first, prevent damage by actively defending against the air and ground threat; second, limit damage by providing passive defense measures which include hardening, force dispersal, camouflage, concealment deception, and chemical warfare defense; and third, provide the capability to rapidly assess damage and direct efforts toward renewed air operations by removing unexploded ordnance and applying repairs to the most critical facilities.

In concert, these improvement efforts underwrite our readiness, sustainability, modernization and force structure investments. This program draws on complementary funding from many appropriations, NATO infrastructure funding, and on host nation and other Service support.

The $492 million requested in FY 87 enables us to continue programs that increase the survivability of our personnel and equipment during crisis.

Army/Air Force MOA on Air Base Ground Defense

The May 22, 1984 CSAF/CSA Memorandum contains two initiatives directly impacting the Air Base Ground Defense (ABGD) program. One tasks the Army with providing ABGD beyond the base boundary. Conversely, the Air Force retains internal (on-base) defense responsibility as well as operational control over the joint defense force. The other initiative tasks the Army with providing ground combat training to Air Force ground defense forces.

The CSAF/CSA initiatives have already resulted in significant adjustments in the ABGD funding profile, to include the FY 87 increment. Further outyear adjustments, if necessary, will occur as we continue implementing these initiatives.

Host Nation Support

Host Nation Support (HNS) includes those services that allied nations provide to US forces deployed in support of overseas defense commitments. The goal of wartime HNS (WHNS) is to ensure the availability of critical wartime logistics support for forward deployed and reinforcing US forces without further straining US mobility and support resources. This enhances combat readiness by reducing the requirement for deployment of US logistic support units.

The USAF seeks to increase assured host nation contributions for support of our combat forces when militarily prudent and politically feasible. The US will continue to increase HNS in those areas where there is a reasonable assurance of availability when needed.

The Transatlantic Bargain established at the 1978 NATO summit called for an increase in US reinforcements to NATO if the Allies would increase their level of support. In 1980, the US identified long-term, time-phased HNS logistic requirements and provided them to host nation Ministries of Defense. These initiatives resulted in signed Statements of Principle with Belgium, the Netherlands, Luxembourg and the United Kingdom indicating their willingness to increase support of US forces in wartime. On April 15, 1982, the US and Germany signed a WHNS Agreement entailing the creation of new units in the Bundeswehr Reserve that, upon mobilization, would be dedicated to the wartime logistics support of US combat forces. The Air Force will receive German support personnel for airbase security, airfield damage repair, COB augmentation and medical evacuation. Under a cost sharing formula that supports the agreement, the US pays for civilian salaries, procurement of unit equipment, and annual operations and maintenance.

Assured HNS complements and increases our combat capability through allied involvement and burden sharing. The Air Force's objective is to use HNS to reduce present documented shortfalls in force structure. However, Central Region HNS must not develop into total reliance that would preclude US requirements for world-wide flexibility and deployment. Premature adjustments to US active duty/reserve strength based on potential HNS would be unwise. HNS should not be considered as a direct offset to US force structure until the sum of the assured HNS, plus the capability of US support units, equals or exceeds the total requirement. Assured HNS assumes resources are fully manned, trained, equipped, exercised, successfully evaluated and included in contingency plans. These criteria are not yet met and until they are, HNS should only be considered a risk reduction measure.

Collocated Operating Bases

The Collocated Operating Base (COB) program was developed to provide beddowns for CONUS-based European augmentation forces. COBs are allied military bases with excess capacity and facilities that could be used in wartime to support US reinforcements. USAFE has presently identified over 70 COBs; the exact number varies as negotiations with NATO Allies continue and force structure is adjusted to meet the threat.

USAFE has determined that, operationally, the minimum essential facilities (MEF) required at each COB are adequate aircraft parking (not nessarily dispersed) and storage for seven days of POL and munitions. Other essential operating facilities and airfield survivability measures are also required, but MEF will permit combat operations from the COBs.

NATO funding for the 1978-84 time frame totalled approximately $83 million for COB upgrades. With the recent authorization of NATO Slice (SL) 35 MEF projects and the approval of SL 36, a total of 36 COBs have been MEF funded or completed. Remaining projects will require approximately $270 million to complete.

Including funding in FY 85, $586.6 million (all Services) has been authorized and appropriated for prefinancing COB upgrades. $369.1 million has been recouped from NATO, and an additional $44.2 million has been programmed by NATO in infrastructure slices. Recoupment of the remaining $173.3 million will be requested in the NATO Slices 38-41 (CY 87-90), but attainment of this goal is subject to many variables outside our direct control. Recoupment of prefinanced projects competes directly with the new projects for NATO infrastructure funds. However, the US goal is to recoup all funds in the current slice group.

Medical War Readiness

The mission of the USAF Medical Service is to maintain the health of our personnel to ensure maximum wartime readiness and combat capability. The Medical Service also provides, to the greatest extent possible, a peacetime health care system for all beneficiaries. To fulfill our mission, the Air Force Surgeon General has established four major Medical Service priorities: (1) readiness/operational support, (2) quality of care, (3) management innovation and (4) patient satisfaction, supported by responsibility, leadership, accountability and officership. Accomplishing the above priorities will increase the Air Force's capacity to deliver quality health care to military beneficiaries and lessen the dependency on the more costly alternative of CHAMPUS.

The most important mission objective is wartime readiness, toward which we have made substantial progress in planning, programming and budgeting for combat medical support. The remaining objectives, although oriented more toward the peacetime mission of the Medical Service, also enhance our wartime readiness capability.

We do not currently have all the resources needed to provide adequate medical support in wartime. However, through a balanced and executable world-wide program, we have made substantial improvement in theater medical capability. An aggressive war reserve materiel procurement program has allowed us to purchase twenty-three 500-bed contingency hospitals. Ten hospitals have been delivered to in the European theater. All theaters continue to receive increasing stocks of medical materiel for their war reserves programs. With a sustained funding profile through the FY 87-91 FYDP, 100 percent of the medical materiel requirement will be procured. A fully funded FY 87 appropriation buys four 500-bed contingency hospitals, two 250-bed aeromedical staging facilities and eight second-echelon (emergency treatment) units.

Programmed manpower increases, needed to staff our wartime medical structure, will meet eighty-eight percent of the active duty requirement by FY 90. These additional personnel contribute to our war readiness capability and also allow us to expand peacetime medical services, increase quality of care and recapture high dollar CHAMPUS costs.

Hospital Facilities Provided by Host Nations. An agreement has been made for the provision of an interim capability of approximately 40,000 civilian hospital beds in the United Kingdom for use during the initial days of conflict. Considering that the Air Force peak casualty load is predicted to occur early in a NATO conflict, this agreement significantly enhances the existing level of medical readiness, until additional increments of the casualty care system are established. In conjunction with the unified commands, the Air Force components attempt to obtain buildings of opportunity from our Allies and host nations. These buildings are then modified to house the "stuffings," together making up one or more of our contingency hospitals. In Europe, we have successfully obtained buildings on five old Royal Air Force bases in the UK. Additionally, we have recently implemented an agreement with the Federal Republic of Germany for a building in Donaueschingen, Germany to site the second of three 500-bed hospitals to be prepositioned in that country. In the Pacific, the Republic of Korea has provided land to site a 500-bed hospital at Kimhae.

We are negotiating with our allies and host nations to obtain their support to preposition our medical assemblages at or near the site of employment. Unfortunately, due to national, economic and political sensitivities involved, the process is very slow, and in some regions the outcome of these negotiations is not very optimistic. Consequently, when host nation support is not forthcoming, we must be prepared to satisfy our commitment to medical readiness by building medical war reserve materiel (WRM) warehouses through the Military Construction Program (MCP).

Joint Medical Readiness Initiative. We are working very closely with the Army and Navy to improve medical support in wartime. Under the auspices of the JCS Medical Steering Committee, the Services work the issues related to the orchestration of medical support in the unified commands. For example, in the European theater we have worked out the number and locations of each Service's medical facilities; the same is true in the Pacific theater. Further, under the Defense Resources Standardization Board, we have approved quad-Service tables of allowances that will standardize the materiel to be procured in our deployable medical systems. We are also providing manpower authorizations for an increase in the unified commands medical planning staff at USEUCOM and USSOUTHCOM.

FORCE PROJECTION

The Soviets have significantly extended the global reach of their military forces, enhancing their ability to project influence and power, especially in the Third World. They have shown they are willing and able to position and sustain armies beyond their contiguous borders as evidenced by the Soviet forces in Afghanistan, Vietnam and Cuba; and advisors at various outposts in Africa, Central America and the Middle East, to name a few.

Additionally, through Soviet and Soviet-bloc presence abroad, the Soviets have developed a significant network of air and naval basing to support deployed forces. The Soviets are also developing advanced equipment, such as the "C-5 sized" CONDOR aircraft which will greatly enhance their ability to support and insert forces far from their borders.

Our geographic location in relation to Soviet strongholds around the world places a premium on our ability to quickly respond to hostilities in Europe, the Middle East and the Far East. Our ability to deter aggression, limit conflict or wage war successfully is dependent on our capabilities to deploy, employ and sustain fighting units in a timely manner. To achieve national security goals, DoD has developed a deterrent strategy based on a mix of CONUS based and forward-deployed forces. - Inherent in this strategy is the requirement to rapidly project and sustain the required military fighting forces anywhere in the world. The United States' visible means and will to project military power by air can deter our adversaries from taking actions hostile to our interests. Further, force projection can be the stabilizing factor in preventing small crises from escalating into large conflicts.

The airlift mission is currently performed by a combination of general purpose, specialized and dedicated mission aircraft. These resources are operated in active duty, active/associate Reserve and Air Reserve Force Units (Air Force Reserve and Air National Guard) based around the world. These units are augmented by the Civil Reserve Air Fleet (CRAF) program comprised of civil passenger, cargo and cargo-convertible aircraft, operated by commercial airlines. These assets can be called up in various stages during contingency or emergency situations.

In 1983 we began a modernization effort which addressed the need to increase capability and modernize the force structure. This included the C-5B, CRAF enhancement, and the CT-39 and C-140 replacement programs. The KC-10 program was expanded and development of the C-17 continued. In FY 86, three of these programs were completed. The CT-39 fleet has been replaced with 80 C-21s (Lear 35) and 40 C-12s under a lease program. Final procurement of 11 C-20s (Gulfstream III) to replace the C-140 fleet was completed with final delivery in FY 87. The CRAF enhancement program was also finished with funding of 19 B-747 cargo-convertible modifications. FY 87 will be the last year of KC-10 and C-5B procurement.

These acquisitions along with other enhancement/modification programs (C-5A/C-130 wing mod, communication and navigation upgrades, etc.) formed our near-term improvement program. We enhanced aircraft we already possessed and acquired new systems that would be available at the earliest possible date and at the lowest technical risk.

The Air Force program in the future is primarily comprised of two parts. First, in the near term, we will continue enhancement of current systems through upgrade or modification efforts. The cornerstone of our long-term program is development and procurement of the C-17. Required wartime capability, manpower constraints, high reliability and maintainability, and affordability were primary considerations used in our competitive decision to buy the C-17. The excellent operational characteristics and low life cycle cost of the C-17 make it the best choice to meet overall airlift requirements and provide a credible force projection capability well into the 21st century.

Airlift Master Plan

The USAF Airlift Master Plan (AMP) provides the Air Force with long-term goals for effectively managing and employing the airlift assets needed to sustain our military strategy. The plan defines an airlift force structure balancing validated requirements of military utility, operating costs, manpower constraints, force stabilization and force modernization to achieve the most beneficial results. It incorporates numerous airlift issues, focusing on the need to meet airlift shortfalls and to modernize airlift forces.

Our goal is to attain the fiscally constrained 66 million ton-miles-per-day (MTM/D) of airlift capacity recommended by the Congressionally Mandated Mobility Study (CMMS), while maintaining a minimum of 9,000 tons per day intratheater capability. Today our intertheater airlift forces—C-5s, C-141Bs, KC-10s and the Civil Reserve Air Fleet (CRAF)—provide 42 MTM/D (funded) of airlift capability. By obtaining additional KC-10s and C-5Bs as soon as possible, and enhancing the CRAF, we address our critical near-term need for additional airlift. The key to reaching the 66 MTM/D goal, within reasonable fiscal constraints, is the C-17. Only the C-17 offers the flexibility and load capacity to routinely deliver combat forces to their final destination at affordable support and manpower costs. With FY 87 funding, we will continue C-17 development and begin long-lead procurement, expecting initial operational capability in FY 92.

By far, the most difficult mobility requirements to quantify are those dealing with intratheater airlift. This includes movements of cargo and passengers from major theater air and seaports, shifts of prepositioned stock, and tactical requirements growing from the battlefield situation. The intratheater requirement for the insertion, repositioning and resupply of combat forces results from the uncertainty of wartime events. To quantify this requirement, the FY 85 Defense Authorization Bill directed an intratheater mobility study similar in nature to the Congressionally Mandated Mobility Study. We are participating with JCS and the other Services in the OSD-led World-wide Intratheater Mobility Study (WIMS), to define intratheater requirements. The study is currently underway, and the report should be complete in Summer 1986.

Airlift Total Force Plan

The Airlift Total Force Plan (ATFP), published in September 1984, is the natural extension of the Airlift Master Plan. The ATFP allocates the recommended AMP force structure among active and Reserve forces to limit active duty manpower requirements, modernize the fleet and provide a time-phased acquisition and transfer strategy. By FY 98, the Reserve forces will own and operate 44 C-5s, 80 C-141s and

48 C-17s, 152 C-130s and provide approximately 50 percent of the intertheater airlift aircrews. The ATFP maximizes wartime capability during the transition period while providing sufficient peacetime capability at an affordable cost.

Airlift Assets

C-5. To increase our intertheater outsize and oversize capability by 6.6 million ton-miles-per-day (MTM/D), we are acquiring 50 C-5Bs over the next four years. The C-5B is an updated C-5A with upgraded engineering changes including a 30,000 hour wing, GE TF39-1C engines, improved avionics, and the use of more durable, corrosion-resistant alloys. The C-5B program is being executed under a firm, fixed-price contract awarded in December 1982. The first C-5B rolled out in July 1985 and its first flight was conducted on 10 September 1985. This aircraft was delivered to the Air Force in December 1985. The last delivery will be completed in early FY 89. We are requesting $1.954 billion to purchase 21 aircraft in FY 87.

C-17. The C-17 is the key to our long-term program to reduce our major airlift shortfalls, especially in the area of outsize Army equipment. The C-17 offers four vitally needed capabilities: (1) achieves the increase in intertheater airlift capability recommended by the Congressionally Mandated Mobility Study, (2) provides the theater commander with outsize intratheater capability as well as flexible delivery modes, (3) offsets the capability lost as older C-141s and C-130s begin leaving the inventory in the 1990s, and (4) reduces airfield congestion with direct delivery and efficient design characteristics. The air-refuelable C-17 will be able to carry all classes of cargo over intercontinental distances and operate directly into small, "C-130-type" airfields typical of contingency areas around the world. This performance comes from integrating demonstrated and proven technology, and will be capable of all delivery modes; i.e., airland, airdrop (including outsize) and low altitude parachute extraction (including outsize).

The C-17 will satisfy the overall airlift requirement at the lowest life cycle cost of any other alternative that provides equivalent capability. We plan to procure 210 C-17s from FY 88 through FY 98 and deploy the aircraft in active duty, active/associate Reserve, and organic Reserve and Guard units based in the CONUS. The Air Force request for $829.6 million in FY 87 will continue full scale development and initiate procurement toward a production start in FY 88.

Other Airlift Programs

C-12F/C-21A. The mission of the Operational Support Airlift (OSA) fleet is twofold. The wartime mission is the time-sensitive movement of critical people and cargo throughout the continental United States (CONUS) and combat theaters. The peacetime mission, based on wartime readiness, is to provide low cost pilot seasoning for recent pilot training graduates. Peacetime OSA also provides essential training for other operational personnel and quick reaction logistics support. Current aircraft being used to fulfill the requirements of the OSA mission include the C-21A and the C-12F.

The C-12F/C-21A program was initiated to replace the existing CT-39 fleet. By leasing C-12F and C-21A aircraft, we were able to modernize the OSA fleet while saving money. Leasing was far less expensive than continuing to operate the CT-39 fleet. The Air Force also took advantage of a favorable commercial aircraft market to minimize cost of the OSA replacement.

Presidential Support Aircraft. The two existing Air Force One aircraft have significant deficiencies and limitations and must be replaced. The present aircraft are 13 and 23 years old and are becoming increasingly difficult to maintain and support. The range, endurance, and communications capability of the present aircraft are less than desired and adversely affect contingency plans and day-to-day peacetime operations. Finally, the limited size of the aircraft precludes adding new requirements such as a medical facility, an area for the NSC staff, and improved rest and work accommodations for the staff and guests.

The replacement aircraft must be a new, FAA certified, commercial wide body aircraft with more than two engines. In addition, they must be American manufactured and of a type aircraft having been in commercial airline service for a minimum of two years. The aircraft must be electromagnetic pulse (EMP) hardened to ensure safe flight and communications connectivity with other command and control nodes. The aircraft must be self-contained, have steps and a continuous ground air conditioning system. As a minimum, they must have a range of 6,000 NM when departing from the 10,300 foot runway at Andrews AFB, Maryland. Both Air Force One aircraft will be replaced. The existing aircraft will remain in the Special Air Mission (SAM) fleet for use by other high level executives and members of congress.

The aircraft under consideration are the Boeing 747-SP, 747-300 and the Douglas DC-10. The cost of replacement is estimated to be approximately $488 million, including RDT&E, procurement, and Milcon. We are requesting $83.4 million for RDT&E and procurement, and $45 million for Milcon in our FY 87 budget.

Aerial Refueling Overview

A key attribute of airpower is flexibility. Nothing contributes greater flexibility than the capability to aerial refuel our combat and combat support aircraft. Aerial refueling extends our presence in the combat area and increases the range of our forces, allowing us to bypass troubled areas when overflight would otherwise be required and reduce our vulnerability to attack.

Our requirement for air refueling capability continues to grow. The present fighter force and MAC organic strategic airlift force are entirely air refuelable. As B-52s are modified to carry Air-Launched Cruise Missiles, we need more refueling support to keep the bomber forces flexible and capable. Additionally, the Navy's stated requirements for support by Air Force tankers have increased dramatically. Without tanker modernization, we will remain critically short of the aerial refueling capability needed for both strategic and general purpose missions. Two Air Force programs will help reduce this shortfall, the KC-10 Extender Program and the KC-135R Modernization Program.

KC-10A. The KC-10A is a derivative of the commercial DC-10. Minimum changes have been made to provide the required military capability to transport cargo, air refuel, or perform both roles simultaneously. In a refueling role, the KC-10 can offload up to 127,000 pounds of fuel on a 3,000 NM radius flight. In the dedicated airlift role, it can carry 27 cargo pallets, and the present fleet provides about nine to ten percent of our wartime intertheater airlift capability. Buying the KC-10 reduces both the airlift and tanker shortfall, since we presently employ it in a combined air refueling and cargo mission. We are purchasing this aircraft under a multi-year procurement contract at substantially lower prices than comparable commercial sales.

Procurement of our planned force of 60 KC-10As will be completed in this fiscal year with the purchase of the last eight aircraft. In October 1985, we opened the third KC-10A base at Seymour-Johnson AFB, North Carolina. The KC-10A program is on track and a major success story in multi-year procurement.

KC-135. The KC-135 remains the nation's primary strategic aerial refueling tanker. The "Stratotanker" extends the mission duration and warfighting effectiveness of all USAF combat aircraft by providing global inflight refueling during deployment, employment and redeployment operations. Moreover, the KC-135 is an integral part of the Single Integrated Operational Plan (SIOP), providing mission critical fuel to the strategic bomber force. Inflight refueling enhances combat operations by enhancing planning flexibility and increasing combat time and mission range. The KC-135R modernization program provides a significant 50 percent increase in fuel available for transfer when compared to the basic KC-135A airplane. This increased offload capability is due largely to the new CFM56 high by-pass turbofan engines, added in the KC-135R modernization. In addition to increasing thrust, decreasing fuel consumption, and decreasing the noise and air pollution, the modernization program updates 25 aircraft systems, including the landing gear, electrical system and auxiliary power units. This total modernization provides a highly reliable and maintainable aircraft that will help us meet the nation's refueling requirements well beyond the year 2000.

Through FY 86, we have funded 145 KC-135R modernizations. The first Strategic Air Command unit to complete conversion was at McConnell Air Force Base, Kansas. The conversion was completed with superb results, and the modernized aircraft have performed exactly as planned. We've started conversion of the second unit at Ellsworth AFB, South Dakota. This Air Force program funds a total of 395 KC-135R conversions through 1991. FY 87 funds will procure 50 modification kits at $865.8 million, bringing the total ordered to 195

Low Intensity Conflict

Low Intensity Conflict (LIC) is a broad term used to characterize conflicts occurring below the threshold of theater warfare, including everything from regional conflicts to guerilla action and terrorism. The Soviet Union and its surrogates have both encouraged and supported world-wide insurgency and terrorism as a way of achieving their objectives without direct confrontation with the Free World. These low intensity conflicts will likely be the most pervasive threat to Free World security for the remainder of this century.

A big step in dealing with this threat is the Center for Low Intensity Conflict we've just set up with the Army at Langley Air Force Base. The Center will examine LIC in an integrated way, focus on what has to be done and look into how we can make the best use of the resources we have, including those capabilities designed specifically for special operations. The Center is also the focal point to plan and program for the integration of future forces.

There is a misconception that LIC and Special Operations Forces (SOF) are synonymous. In reality, our Special Operations Forces are trained to fight at all levels of conflict, not just low intensity conflicts. On the other hand, LIC is much broader than the capabilities associated with SOF. To illustrate, we have been "countering threats" to Saudi Arabian security since 1980 with four E-3A AWACs airplanes supported by KC-10 and KC-135 tankers. As Grenada showed, airdrop provided by C-130s and C-141s is a major capability in low intensity warfare. And security assistance programs have a big job to do in low intensity conflict; they help friendly governments help themselves. The military has a definite role in low intensity conflict, but in many cases the non-military instruments of national power take priority.

Special Operations. A broad spectrum of Air Force combat assets can be used for LIC as the need dictates. However, US Special Operations Forces provide unique capabilities to respond to this threat and a wide range of crises in a flexible manner. They can conduct a wide range of missions at all levels of conflict, providing the United States with unique options in situations when use of large scale conventional forces would be premature, inappropriate or unnecessarily provocative. Air Force SOF provides airlift and selective firepower support for Army Special Forces, Army Rangers, and Naval Special Warfare Units. In conjunction with those forces, Air Force SOF conducts or supports foreign internal defense, unconventional warfare, direct action/strike missions, psychological operations (PSYOP) and contingency missions. Most SOF missions are dependent on surprise, achieved through secrecy and special equipment. Because of this, Air Force SOF assets are comprised of specially configured equipment and personnel trained to conduct unusual, short-notice, sensitive and low visibility operations. Although many types of aerospace forces have application in special operations, the Air Force organizes, trains and equips specific units to conduct special operations as their primary mission. These units are equipped with MC-130, AC-130, EC-130, HH-53H and CH-3E aircraft. These forces are prepared to participate in both large and small scale operations and have the flexibility to conduct operations throughout the spectrum of conflict.

The MC-130H Combat Talon II and AC-130 gunship programs were developed to provide additional capability and to reduce the shortfalls in the existing MC-130E and AC-130 A/H fleets. These aircraft will have physical and performance characteristics similar to a basic C-130H, with extended range operations possible as a result of their aerial refueling capability. In addition, these aircraft will be uniquely equipped with integrated avionics systems and defense electronic suites, providing the special operations mission with required capabilities.

AC-130. The Air Force will buy 12 C-130H airframes from Lockheed, Georgia for conversion to AC-130 gunships. An avionics and weapons systems integration contract will be competed, after evaluating responses to a 1985 request for information (RFI). The FY 87 budget request of $46.8 million will begin development of a prototype AC-130 gunship.

MC-130. The MC-130H Combat Talon II is a night, adverse weather transport dedicated to the SOF mission. Used primarily for infiltration, exfiltration and resupply of Special Forces and Navy Seals, the requirement for this aircraft continues to increase. We plan a total buy of 21 aircraft to augment our current limited force. The FY 87 budget request of $251.5 million procures five MC-130Hs.

Joint Service Advanced Vertical Lift Aircraft. The CV-22A Osprey program is an OSD initiative to develop a common aircraft to satisfy various mission requirements for all four Services. The CV-22A would provide the Air Force with an advanced technology fixed wing, tilt rotor aircraft with long range, vertical lift, night/adverse weather capabilities to conduct long range SOF exfiltration missions that cannot be accomplished by the MC-130H aircraft.

Funding for the development of both the aircraft and engines has been provided through the Navy, at a total cost estimated at $2.5 billion, in then year (TY) dollars. We will fund Air Force unique system developments. We have identified a requirement for 80 CV-22A aircraft, and expect the first delivery in FY 93 and the last in FY 97. Our FY 87 budget request is for $4.9 million for RDT&E.

Rotary Wing SOF Requirements. In order to save money and reduce inter-Service duplication, the Air Force and Army agreed to transfer responsibility for rotary wing SOF air support to the Army. Due to congressional concerns, a date for full implementation of this Air Force/Army memorandum of agreement (Initiative 17) has not been determined. In the interim, the Air Force is continuing to revitalize SOF rotary wing assets. We will retain the long-range SOF mission until such time as it is clear that the Army has the capability to assume the entire rotary SOF mission. To do this, we are modifying 12 C/HH-53 aircraft to the HH-53H PAVE LOW III configuration. This will give the Air Force a total of 19 PAVE LOW III aircraft.

Drug Interdiction Mission for SOF. A range of options has been evaluated by the Joint Chiefs of Staff, relating to creation of a Reserve airborne surveillance and detection organization that would aid in the war against drugs. We support the JCS proposal that would assign eight Navy P-3s to a peacetime drug interdiction area surveillance mission and a wartime/sea-surveillance mission. Additionally, two specially configured Air Force C-130s would be assigned to Southern Command to support drug interdiction air-land surveillance.

The FY 86 Continuing Resolution provided partial funding, not requested by the Air Force, for procuring a stretched variant of the C-130 as a drug interdiction platform. This aircraft would have some of the gunship unique systems but would lack major subsystems such as the weapons suite. We believe this would dilute congressional actions to increase the resources and training for dedicated SOF mission capabilities. There are major differences between the SOF and drug interdiction missions. For example, our SOF gunship missions require the equipment and training needed for highly accurate navigation to a precise point, under stringent timing and accuracy requirements, to rapidly perform accurate target detection and selective destruction, or to support ground and naval direct action special operations. This mission is the antithesis of broad area search and surveillance which the drug mission requires. Furthermore, crews flying and training in AC-130s without guns and fire control systems will not be combat ready for missions that require aiming, firing, loading and maintaining guns.

To perform the drug interdiction mission legally and efficiently, we must establish the best mix of peacetime and wartime mission; the JCS recommendation will accomplish this.

THEATER FORCES

Since the 1960s, the Soviets have steadily expanded their global influence. The USSR has accomplished this expansion while continuing to out-produce the US and its allies in virtually every category of weaponry, and steadily eroding our qualitative edge by fielding technologically advanced systems. To meet this global threat, the Air Force is placing high priority on the modernization and expansion of its theater forces.

The forces required to meet this challenge are a composite of many capabilities; i.e., fighter and reconnaissance aircraft, electronic combat forces, special operations forces, intratheater airlift, specialized command and control aircraft and the conventional combat capability of our strategic bombers. Additionally, stocks of modern munitions are required to provide accuracy and lethality while enhancing the survivability of our limited assets. A modern command, control, communications and intelligence (C^3I) system is essential to the efficient, flexible employment of a combat force in all theaters.

Geography, allied resources, the political climate and threats in each theater are different; therefore, force requirements are unique. However, procurement of specialized theater systems must be minimized to reduce costs and increase intertheater flexibility. We seek to give our systems world-wide applicability by using the most demanding scenario to determine weapon systems requirements. In general, we plan to tailor the forces assigned to a theater to meet its special requirements, while providing the maximum flexibility for intertheater reinforcement and logistics support. Although exceptions do exist, they are few in relation to the many systems common to all theaters. Unique systems are procured only after all other common, alternative systems have been examined and found to be inadequate.

The Air Force uses a series of carefully conceived plans to guide its procurement strategies to ensure that only the required systems are purchased. These plans are the Tactical Fighter Roadmap, the Airlift Master Plan and Airlift Total Force Plan, the Special Operations Forces Master Plan, the Munitions Acquisition Plan, and the Electronic Combat Master Plan and Roadmap. By following the guidelines laid down in these documents, we realize the most combat capability, with the least chance of duplication, within fiscal constraints.

We plan to capitalize on our advantages in technology, tactics, and dedicated, well-trained people to maintain a combat-ready, flexible, tactical air force. Because of the growth in Soviet military power and the steady improvement in their combat capabilities, we must continue to modernize and expand our tactical air forces while maintaining the sharp edge of readiness.

Soviet Force Developments

Theater forces face growing air and ground threats. Soviet air forces continue to receive more capable aircraft like the FULCRUM A and FOXHOUND A (and soon the FLANKER B) with improved avionics and armament systems. These systems will also employ improved munitions and be supported by sophisticated electronic combat and command and control systems.

The most significant change since the Soviet Air Force reorganization of 1978 has been an increased emphasis on the ground attack mission. The Soviets are transforming their limited range, low payload, day fighter force into a potent, long-range tactical air arm with increasing capability to operate in bad weather. Since 1980 the Soviets have produced an average of 1,000 new fighters a year and are in production with newer generation FULCRUM A and FLANKER B air-to-air fighters. The new generation of Soviet fighters signifies their intention to equal or exceed the combat capability of US and allied tactical aircraft.

Aircraft suitable for long-range interdiction include the BADGER, BLINDER, and BACKFIRE bombers, as well as the FENCER attack aircraft. FLOGGER and FITTER fighter-bombers fly tactical ground attack missions. Direct troop support is the job of FROGFOOT fighter-bombers and HIP and HIND helicopters. FLOGGER and FISHBED air superiority fighters provide defensive cover and escort. Over the next ten years, we expect the Soviet tactical and theater air forces to receive more modern aircraft and the ground attack force to continue to receive new FENCER and FROGFOOT aircraft. We estimate that by the late 1980s FLANKER B and FULCRUM A, the two newest counterair aircraft, should be in the inventory in significant numbers.

The Soviets have also modernized and expanded their ability to conduct theater offensive chemical and nuclear operations with the deployment of the mobile SS-20 intermediate-range ballistic missile. This system places nearly all of NATO's forces at risk with little or no attack warning.

The mobility and firepower of Soviet ground forces arrayed against NATO have also improved greatly. A steady infusion of large numbers of new tanks, infantry fighting vehicles, self-propelled artillery, and attack helicopters enables them to conduct rapid offensive operations with massive firepower. To protect this force, the Soviets have also fielded sophisticated air defense artillery and an expanding family of surface-to-air missiles, all supported by a linked array of mobile and fixed radars. Also, Soviet operations in Afghanistan have allowed them to test and operate new equipment and train people under actual field conditions.

Forward-deployed Soviet ground forces continue to modernize and deploy a formidable array of modern tactical surface-to-air missile (SAM) systems and anti-aircraft artillery . A new system which poses a major threat to tactical aircraft is the SA-X-12. The SA-X-12 is mobile and is expected to have good capability against low-flying US systems.

The Soviets have also continued to build and project their military power in other critical regions throughout the world. For example, before the early 1970s, Soviet warships seldom steamed into the Pacific in large numbers; now they have their largest fleet there, with over 676 ships and submarines and a large number of principal surface combatants.

They also have a large, modern aviation force in the Pacific. In fact, since 1970, they have tripled the number of tactical fixed-wing aircraft dedicated to the Pacific theater. In 1965 they had only 20 land divisions in the region; now they have 52. Forty percent of their ballistic missile submarines patrol Pacific waters, and they have established a major naval base at Cam Rahn Bay in Vietnam. Having a naval facility in such a strategic location increases their presence and gives them the ability to project power and create instability with little warning.

Along with their military build-up, the Soviets are giving assistance to Vietnamese forces occupying Kampuchea and threatening Thailand. They also support North Korea which already has one of the largest armies in the world, over 1.4 million active and reserve. These formidable North Korean forces are maintained at a high state of readiness and pose a direct threat to our forces based in South Korea. Finally, the Communist Party of the Philippines and its military arm, the New People's Army (NPA), pose the principal threat to our bases there in that country. The military threat arises from NPA capability to wage a terrorist/sabotage campaign against US personnel should they choose to do so.

Although new threat systems have not been introduced into Central America during the past year, the Nicaraguans continue to upgrade their air defense capability by importing additional Soviet anti-aircraft guns and early warning and ground control intercept (GCI) radars. Nicaraguans have received MiG-21 and surface-to-air missile training abroad and have continued to receive shipments of ammunition, armor and new helicopter gunships.

The Tactical Challenge

Forward basing of forces in peacetime and a rapid reinforcement capability in wartime are the foundation of the US commitment and contribution to the security of our friends and allies. Within this context, the strength of our tactical air forces reflects both our commitment and capability to deter the Soviet Union and its allies from aggression; or, if deterrence should fail, to resolve the conflict quickly and at the lowest level, on terms favorable to the US and its allies.

The size and composition of US forces for this purpose are determined by a careful assessment of the threat. Exact force structure elements are determined by availability of resources, fiscal and political sustainability, and risk assessment. US force goals in all theaters are formulated to provide essential capabilities, minimize unnecessary duplication and ensure that the US and our allies are prepared to preserve peace and enhance security.

In the air-to-air role, our aircraft must detect, attack and destroy numerically superior, sophisticated Soviet combat aircraft. We must be capable of gaining the initiative and achieving essential air superiority in a manner that minimizes potential losses to our limited forces. To accomplish this feat, we need autonomous search radars, efficient command and control (C^2), a mix of air-to-air missiles and guns, avionics that help us employ these weapons, and superior aircraft performance.

In the air-to-surface role, we must be capable of delivering concentrated, effective firepower in support of both the air and surface battle. To do so, our aircraft must be capable of evading and suppressing enemy defenses. They should be able to deliver their munitions day or night, in all weather conditions, and whenever and wherever enemy forces are conducting offensive operations. We need weapons that are effective, accurate and lethal with minimal aircraft vulnerability. In particular, precision-guided munitions substantially reduce the cost of destroying an opposing force, both in terms of sorties required and friendly losses.

To ensure the effectiveness of our theater air forces, we require combat support systems to suppress enemy defenses, disrupt their command and control capability, provide real-time warning and control, and extend the on-station and mission-duration time of our limited assets. For the suppresion and disruption missions we are deploying F-4Gs, EF-111s, Precision Location Strike System (PLSS) and updating our EC-130 Compass Call aircraft. To provide airborne warning and control, we are improving the capability of the E-3A AWACS. We are also developing Joint STARS on the C-18 to locate moving ground targets. The capability of the KC-135 fleet is being increased through the tanker modernization program, which through reengining and other modifications, effectively increases each tanker's offload capability by 50 percent; we also continue to procure the KC-10A. These improvements in combat support act as a force multiplier and serve to help offset the quantitative disparity between US and US-allied forces and those of the Soviet Union and its allies.

Arms Control and Treaty Relationships Affecting Theater Forces

Mutual and Balanced Force Reductions (MBFR) talks between NATO and the Warsaw Pact have been underway in Vienna since 1973. These talks are concerned with the reduction and limitation of conventional forces in Europe and with associated confidence building, stabilization and verification measures. On April 19, 1984 (Round 32) the West presented a new draft treaty proposal that included: (1) increased flexibility in the Western approach to data exchange, (2) enhanced verification measures and (3) an unconditional commitment by the US and the Soviet Union to reduce to final national forces ceilings once these ceilings are negotiated. The East did not respond until February 14, 1985 (Round 35), when they presented a new proposal that called for bilateral US and Soviet initial reductions, a "no increase commitment" on all forces of both sides, and further negotiations to determine final reductions. Round 37 began on September 26, 1985 with the apparent lessening of differences between the two sides.

The Air Force strongly supports negotiations aimed at arms reduction agreements that directly improve our national security. Arms control helps maintain the US deterrent, but is not a substitute for US military preparedness. Sound arms control measures, however, can help limit the threat, reduce uncertainties, constrain strategic program costs, and make allocating critical resources more manageable.

The ANZUS Treaty, signed in 1951 by Australia, New Zealand and the US, recognizes that an armed attack in the Pacific area on any of the parties would be dangerous to the peace and safety of all signatories. As such, the member nations have agreed to meet the common danger in accordance with their individual constitutional processes. The "armed attack" provision of the treaty includes any such attack on a member's metropolitan territory; Pacific island territories under their individual jurisdictions; and their armed forces, public vessels and aircraft. In spite of this cooperative defense agreement, New Zealand recently refused a port call by a US warship unless the US first declared whether the ship carried nuclear weapons. The implications of New Zealand's refusal remain unclear. A decline in US military cooperation with New Zealand could hamper efforts to increase interoperability and standardization, if New Zealand turns to other suppliers of military equipment.

Tactical Fighter Roadmap

In any conflict, our tactical air forces must first, quickly achieve air superiority so that our ground and air forces can fight and be reinforced free from disruption of enemy air attacks and second, provide critical offensive air support to ground forces.

In the air-to-air role, our aircraft must be able to detect and destroy numerically superior, sophisticated Soviet aircraft. In the air-to-surface role, they must be able to evade and suppress enemy defenses and deliver ordnance in all weather conditions, when and where required. Two years ago, we developed the Tactical Fighter Roadmap to guide us in achieving and maintaining this force.

Our global commitments and the strategy to meet these commitments require that we plan our forces for world-wide deployment. These demands, compounded by the size and lethality of Soviet air and ground forces, dictate a requirement for over 40 tactical fighter wing equivalents. We are also required to maintain 14 fighter squadrons for strategic air defense.

In view of fiscal realities and projected fighter procurement quantities, the Air Force has established a force structure goal of 40 tactical fighter wing (TFW) equivalents and to maintain that fleet of aircraft at an average age of ten years. This requires procuring between 260 and 280 aircraft per year. We are also conducting a fighter procurement competition in order to satisfy our strategic air defense requirements at the most economic cost.

In addition to procuring new aircraft, we need increased capability and supportability programs to extend the useful life of the aircraft in our inventory. Historically, aircraft have been retired when they can no longer meet the mission demands due to either a lack of competitiveness with the threat or for supportability reasons. For planning purposes, 20 years has been used as a frame of reference for the useful life of a fighter aircraft. Some systems, such as the F-111, can and will be retained in the force beyond 30 years because they are not routinely subjected to high G loading and, with modifications, continue to provide excellent combat capability. Conversely, the F-4C has become difficult to maintain and operate because of its mission and age. While modifications to ensure combat capability have continually been made to the F-4C fleet to sustain its viability, cost considerations and growing threat capability dictate a retirement date no later than FY 89.

We will continue to explore every available avenue to procure the force structure necessary to protect our national interests. The Tactical Fighter Roadmap will continue to be revised so that we can reach our objective in the most affordable and cost effective manner. The President's FY 87 Budget reflects the actions we must take to achieve this more capable force.

The Air Force is requesting 264 tactical fighters (48 F-15Es and 216 F-16C/Ds) and 20 Air Defense Competition aircraft in FY 87. The remainder of the FYDP includes an annual buy of 60 Air Defense Competition Aircraft for strategic defense forces and 48 F-15Es and 216 F-16s to build to and sustain our 40 TFW force.

The Air Reserve Forces constitute a vital and substantial (approximately one-third) portion of the total tactical fighter force. The Air Force Reserve and Air National Guard have demonstrated both quick response and effectiveness when called on to augment the active forces. All Guard and Reserve tactical fighter units are required and have demonstrated the capability to respond to world-wide deployment tasking on short notice. Current and programmed modernization efforts ensure that these forces will retain capabilities comparable to the active units they augment.

The Air Reserve Force will continue to grow and modernize at a rate equivalent to the active force. They are already equipped with F-15s, F-16s and special capability F-4s and will continue to receive these aircraft to replace older, less capable F-4Cs and F-106s. A number of units currently authorized 18 primary authorized aircraft (PAA) will be expanded to 24 PAA. Additionally, A-7 and A-10 aircraft are being upgraded to increase their capabilities and survivability. Also, the F-4 is being modified with low-smoke engines, electronic countermeasure suites, an increased accuracy bombing system and an AIM-9L capability to make it more survivable and effective.

F-15. To help meet the air threat and provide badly needed long-range surface attack capability, we are procuring the F-15E Dual Role Fighter. The F-15E retains its basic air superiority capability and includes a mission-specialized rear cockpit, new avionics, LANTIRN and additional air-to-surface weapons capability. In this configuration, the F-15E can perform all-weather navigation, deep penetration and night/adverse-weather attack with large air-to-surface weapons payloads and air superiority missions, if needed. In FY 87 we are requesting $2.236 billion to procure 48 F-15Es, provide initial spares and continue necessary RDT&E.

The F-15 Eagle is armed with both AIM-7 and AIM-9 missiles and the M-61 20mm cannon. It provides close-in visual and medium range all-weatner kill capability and has replaced the F-4E as the primary air superiority fighter in the tactical air forces. Future effectiveness of the F-15 in the air superiority mode will be maintained by employment of the Aim-120 Advanced Medium Range Air-to-Air Missile (AMRAAM).

To maintain the F-15's competitive edge over the threat we have initiated development and production of avionics changes to enhance the F-15's air superiority and air defense capabilities through the 1990s. These avionics changes provide expanded capabilities in the air-to-air role through software features in the radar, addition of AMRAAM and incorporation of improved communications and identification equipment. The avionics changes also include updates to the electronic warfare system to meet the current and projected threat. Improvements to the radar have been initiated which will incorporate much greater computer speed and memory, greater bandwidth and frequency flexibility, and computer enhanced air-to-air electronic counter-countermeasures (ECCM) modes and identification features. Our Multistaged Improvement Program (MSIP) calls for incorporation of these improvements during production and retrofit for aircraft already delivered.

Introducing the AMRAAM will significantly improve F-15 lethality and survivability. Its performance envelope is significantly greater than that of the AIM-7F/M, and it has increased speed. AMRAAM will provide the aircrews a "launch and maneuver" capability, add the capability for multiple target attacks during a single intercept and have improved resistance to electronic countermeasures. Greater accuracy, improved fuzing and increased warhead lethality combine to enhance the total system. The missile's combat capability will double the effectiveness of the F-15 and triple that of the F-16 in the air-to-air role. AMRAAM will also reduce attrition and thus preserve valuable pilot lives and aircraft for longer periods of time than would be possible with current weapons.

F-16. The F-16 is a single engine, lightweight, high performance, multimission fighter. The US Air Force plans a total buy of 3,047 F-16s through FY 94 to replace aging F-4s and to modernize the Air Reserve Forces. The aircraft procured in FY 87 will be F-16 C/Ds which include numerous improvements over the original F-16 A/B.

The F-16 C/D has a reconfigured cockpit, improved radar and increased computer capacity. These improvements will facilitate the incorporation and employment of advanced subsystems, including AMRAAM; Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN); the Airborne Self Protection Jammer (ASPJ); a new radar warning receiver; Global Positioning System Equipment and interface equipment for the Precision Location Strike System (PLSS).

In FY 87, the Air Force is requesting $3.843 billion for the procurement of 216 aircraft plus initial spares in the second year of a four-year multi-year procurement. This is a follow-on to the original F-16 multi-year procurement that spanned FY 82-85 and saved $257 million. The follow-on multi-year program (FY 86-89) was approved in FY 85. This multi-year program is projected to save $358 million.

As part of the modernization of the Reserve Force, we have activated two F-16 squadrons. The first is an Air National Guard (ANG) unit at McEntire AGB, South Carolina, and the second is an Air Force Reserve squadron at Hill AFB, Utah. Three additional ANG units will activate in FY 86, followed by three more in FY 87; and the Air Force Reserve will activate its second F-16 unit in FY 87. The F-16, specially configured, will also compete to fill the requirement for a modern air defense fighter, beginning in FY 87. These aircraft would be delivered to the Air National Guard, beginning in FY 89.

LANTIRN. The Low Altitude Navigation and Targeting Infrared System for Night (LANTIRN) provides the capability for the F-15E and F-16C/D to ingress and egress the target area below enemy air defenses at night and in conditions of limited visibility. It also provides the capability to find and accurately attack tactical targets with IIR Maverick missiles, laser guided bombs and other conventional ordnance. The system consists of a navigation pod and a targeting pod. The navigation pod contains a terrain following radar (TFR) and a fixed infrared sensor. The TFR data and infrared image are both displayed on a head up display (HUD) to provide a "night window" to the pilot. The targeting pod contains a laser designator, a dual field of view gimbaled infrared sensor (digital FLIR), a missile boresight correlator for aligning the IIR Maverick to the targeting pod picture, and the processors/cooling unit needed to service the pod. A total of $40.1 million for RDT&E and $784.6 million for procurement is being requested in FY 87. These development funds are needed to support flight testing for LANTIRN/F-15E, F-16/Auto Terrain Avoidance (ATA) and continued development of support equipment. The procurement funds will purchase 143 navigation pods, seven targeting pods (including two additional sets of LRUs), six sets of support equipment and initial spares.

The LANTIRN program continues under the Air Force-established cost cap of $2.31 billion in FY 80 dollars. Both the development and production programs are cost capped with firm, fixed-price (FFP) contracts. The Air Force signed the FFP production contract with Martin Marietta Corporation on April 1, 1985. This contract contains six annual FFP production options to purchase all 700 pod sets (navigation and targeting) and 29 sets of intermediate-level support equipment. It also incorporates option exercise milestone criteria, a variation-in-quantity clause, excellent performance warranty provisions and reliability incentives.

The navigation pod combined DT&E/IOT&E flight test program was successfully completed in December 1984. Although the AFOTEC report rated operational effectiveness as satisfactory, it identified deficiencies in the reliability and maintainability (R&M) area. An AFSARC Milestone IIIA decision on the navigation pod was made in March 1985, to begin low rate initial production and conduct follow-on testing to verify the fixes that were identified for the R&M deficiencies. The follow-on testing was conducted from March-September 1985. The test results were excellent; navigation pod reliability now stands at approximately 29 hours mean time between maintenance (MTBM), well ahead of the projected 17 hours MTBM. Exercise of the Lot II production option was approved on September 27, 1985.

The targeting pod had two false starts in DT&E. The pods were refurbished in the August-November 1984 time frame and began a "fly-fix-fly" phase in December 1984. Targeting pod DT&E for score was restarted in early April 1985 as scheduled. To date, approximately 222 targeting pod sorties have been flown, with the pods accumulating over 60,000 miles of flight, over 20,000 of which were at night and at low altitude. Automatic gain control, F-16 aircraft software improvements and slew control updates were installed in the May-June 1985 time frame to correct performance problems discovered in the early testing. Since that time, pilots have noted an overall improvement in the FLIR picture and tracker stability. The pod has achieved "lock-on" to vehicle-size targets at 6 miles (3-4 was expected), accomplished numerous IR Maverick missile handoffs and demonstrated successful laser ranging and designation capability. These results are encouraging in terms of providing an acceptable pilot workload. We began IOT&E in January 1986 and expect a production decision (AFSARC Milestone III) after the completion of IOT&E this spring.

Advanced Tactical Fighter. The Soviets are introducing a new generation of fighters with look-down/shoot-down capability and improved missile performance, as well as large numbers of improved surface to air missiles (SAM) and an airborne warning and control aircraft to detect and direct attacks on low flying aircraft. If not countered, this new and growing threat will deny us the protection of low altitude tactics and reduce the effectiveness of other tactics used to penetrate hostile airspace.

New Soviet fighters being introduced in the mid-1990s have vastly improved maneuverability, acceleration, and fire control capability (all aspect, look-down/shoot-down, and beyond-visual-range engagement capability), equivalent to our F-15. They are also developing and fielding large numbers of improved surface-to-air missile systems. The next generation of Soviet fighters is projected to appear in significant numbers by 1995 and will exceed our ability to effectively counter them with F-15s/F-16s.

A new fighter, which capitalizes on technological advances, is necessary to regain the performance advantage essential to achieving air superiority with limited numbers of fighters. The Advanced Tactical Fighter (ATF) places design emphasis on ability to penetrate enemy airspace, survive against the SAMs and achieve first-look, first-kill capability against multiple targets.

The ATF will be lethal, durable and survivable in a high threat environment. Improved supportability features which permit high sortie rates are being designed in, from the outset. Additionally, the ATF will have inherent air-to-surface capabilities without compromising its air superiority performance. We are requesting $294.1 million in FY 87 to continue our development efforts.

Alternate Fighter Engine. The Air Force initiated the Alternate Fighter Engine (AFE) program in 1983 to provide greater availability of fighter engines and to bring competitive efficiencies to the fighter engine market. The two competing engines were the General Electric F110 and the Pratt and Whitney F100. The F110 engine takes advantage of previous development of the F101 (B-1 engine) to provide an improved fighter engine. The F100-220 is an F100 engine with a modification for the Digital Electronic Engine Control and an Increased Life Core of over twice the life of today's F100. The competition was based upon the durability, reliability, maintainability and operability characteristics of the engines as demonstrated in tests and supported by contractor warranties.

The competitive source selection was completed in February 1984 when one year (partial year buy) firm, fixed-price contracts were awarded to both companies. These contracts provided for the acquisition of 41 Pratt & Whitney engines for new production F-15 aircraft and 126 General Electric engines for new production F-16 aircraft. In February 1985, the second competitive buy decision (first full year buy) was made when the Secretary of the Air Force announced that General Electric would receive a contract to produce 186 F110 engines for F-16 aircraft, and Pratt and Whitney would receive a contract to build 157 F100-220 engines for both F-15 and F-16 aircraft. In addition, the Secretary's decision included direction to fund the development of a configured engine bay for F-15E aircraft. This would permit the installation of either the F110 or F100-220 engine during the production of future F-15E.

Both contracts contain firm price options for subsequent years. The engine quantities awarded to Pratt & Whitney and General Electric in the future will be determined by deployment plans, contractor performance, demonstrated readiness and supportability, industrial base for high performance fighter engines, congressionally approved programs, and the best balance of engines to satisfy Air Force requirements.

The funding for the F110-GE-100 and F100-PW-220 development ends in FY 1986. At that time both engines will be fully qualified and integrated into F-15 and F-16 aircraft, and their training and support equipment development programs will be complete. The yearly procurement decision by SECAF will continue through FY 1990 (based on the six years of pricing data contained in the proposals) or until development of higher thrust derivatives of these engines, as may be needed to meet the threat in the early 1990s.

Increased Performance Engines. The Increased Performance Engines (IPE) Program supports the Tactical Fighter Roadmap by seeking to develop higher thrust versions of the Pratt and Whitney Aircraft (PWA) F100-PW-220 and General Electric (GE) F110-GE-100 engines for F-15/F-16 aircraft no later than 1990.

Based on the results of an Air Force study, the Secretary of the Air Force decided in May 1985 to begin an IPE program to achieve the required level of engine performance in our F-15/F-16 aircraft to counter the threat in the late 1980s early 1990s. We intend to perform initial engine development and demonstration under the Engine Model Derivative Program (EMDP), then make the transition into full scale development under the Alternate Fighter Engine (AFE) program. This is consistent with FY 84 congressional action, which provided $50 million to initiate higher thrust engine development.

The goal of the IPE Program is to produce growth engines in the 29,000-30,000 pound thrust range, while maintaining at least the current AFE levels of durability, operability, reliability, maintainability and life cycle cost. Both contractors will draw on their latest demonstrated component technologies to achieve higher thrust. We are requesting $165.7 million in FY 87 to develop these engines ($67.7 million under EMDP and $98 million under AFE).

Tactical Reconnaissance and Engagement Systems

Tactical Reconnaissance and Engagement Systems are a group of related programs that will provide a comprehensive picture of the battlefield and allow theater commanders to engage targets in near real-time. The programs are complementary and provide both a standoff and penetrating capability. Standoff programs include the Advanced Synthetic Aperture Radar System (ASARS II) to detect fixed targets; Precision Location Strike System (PLSS) for locating threat emitters; and Joint Surveillance and Target Attack Radar System (Joint STARS) for detecting moving targets. Standoff reconnaissance alone will not meet the needs of the theater commander for accurate, up-to-date information. The Advanced Tactical Air Reconnaissance System (ATARS) will help satisfy this information requirement by providing both a manned and unmanned penetrating capability. We are requesting $399.1 million in FY 87 to continue the development of these critical systems.

The Joint Surveillance and Target Attack Radar System (Joint STARS) is an Air Force/Army program to field a common radar and attack control system. Joint STARS will help delay/disrupt/destroy/divert enemy ground movers from standoff ranges. The ability to attack the enemy's second echelon forces is vital to control their rate of entry into battle and to prevent breakthrough of Allied positions. Joint STARS provides an airborne radar for detection and tracking of enemy forces, along with processing, controller stations, and command and control interfaces. Joint STARS can provide targeting information to tactical aircraft, standoff missiles or to Army organic artillery for precise, real-time attacks against enemy ground moving targets, particularly armored vehicles. Joint STARS is to the ground battle what AWACS is to the air battle, an end-to-end engagement system. To continue the development effort, $355.7 million is requested in FY 87.

The TR-1 is the airborne platform for the Tactical Reconnaissance System (TRS) and PLSS. In the TRS configuration, the TR-1 carries the ASARS II imaging radar and several other sensors. Information collected by these sensors is transmitted on a digital data link to a TR-1 ground station that processes and sends out reports in less than 15 minutes to users from Army group or Air Force level down to division and air operations center levels. In FY 87, $147.9 million is requested for TRS procurement and initial spares.

The concept is similar for TR-1 operations supporting PLSS. Three TR-1s carrying PLSS sensors form a triad transmitting threat radar information to a PLSS ground station. The PLSS ground station, if necessary, can direct a PLSS-equipped strike aircraft or guided weapon to attack the radar, or any other precisely known target. The TR-1 relays the strike guidance to the strike aircraft. We are requesting $126.6 million in FY 87 for continued PLSS development and procurement.

ATARS is an advanced development program to meet the need of tactical commanders for detection, location and classification of tactical targets with sufficient location accuracy and detail to permit the timely delivery of appropriate air or ground launched weapons. These requirements could be met by a mix of tactical reconnaissance platforms, including standoff and penetrating manned and unmanned vehicles. The program initially focused on the concept evaluation and validation of a reconnaissance pod fitted with an integrated electro-optical (EO) imagery sensor and data link system for carriage on F-15/F-16 aircraft. Concurrent development of a ground station to receive and process the data-linked EO imagery was also initiated. Both EO imagery and ground station support are being developed to have commonality with potential unmanned air reconnaissance vehicles. In FY 87, we are requesting $30.6 million to pursue full scale development of EO sensors, retrofit sensors in the RF-4C, develop a reconnaissance pod for the F-15/F-16 aircraft (that will eventually replace the RF-4C) and the ground station.

The Air Force also continues to evaluate the use of remotely piloted vehicles (RPVs) and drones. RPVs and drones (unmanned air reconnaissance vehicles, UARVs) have advantages and disadvantages when compared to manned aircraft. The primary advantages of UARVs are the lower cost when compared to manned systems and that man is not exposed to the threat. This makes the UARV a prime reconnaissance candidate for heavily defended fixed targets. On the negative side, the UARV lacks flight flexibility since the targets are preprogrammed. Other disadvantages are that the UARV does not avoid or react to mobile air or ground based threats, and the system is subject to inherent inertial navigation errors. In addition, the system may be more difficult to deploy and is constrained in peacetime applications and training. Therefore, we believe UARVs are needed to complement, not replace manned systems.

Electronic Combat

The goal of electronic combat (EC) is to effectively control the electro-magnetic spectrum and to deny its use to the enemy. Thus, EC can be a prime factor in reducing combat aircraft attrition. EC must keep pace with the threat. Today, practically every aspect of modern warfare is dependent on the use of electronics. Interdependence between electronic systems is growing, and will continue to grow as systems are integrated and automated. Our technological advantage, enjoyed for decades, is diminishing with the proliferation of sophisticated Soviet electronic systems. The Air Force requires the capability to counter Soviet advances, as they continue to improve their integrated air defense system. Failure to keep pace with the constantly evolving threat could mean a severe loss of US effectiveness in future air battles.

The 1973 Middle East War provided a preview of electronic technology applied in an integrated air defense environment. The more recent 1982 action in Lebanon's Bekaa Valley demonstrated the impact of EC and provided a new baseline for expanding electronic weapon system requirements. We recognize that the proliferation of battlefield electronics is exceeding our capability to respond to each new system or modification. Consequently, the Air Force is developing flexible systems capable of countering a broad array of threats while providing weapon system protection and a rapid reprogramming capability. Achieving this posture depends heavily on a sound technology base and timely, prudent systems acquisition. The military challenges confronting us for the remainder of the century demand that we develop a comprehensive plan covering the actions required to support operations against the enemy's electromagnetic capabilities and that we ensure Air Force programs are fully integrated with other Service requirements and programs.

The Air Force is in the process of finalizing an EC Master Plan and Roadmap (ECMP&R). This document will complement and expand the guidance and programmatic direction provided by the DoD EW Plan (submitted to Congress on August 15, 1985). The ECMP&R provides guidance for staff officers during the planning, programming and budgeting process by integrating commonality, preplanned product improvement and technology base development aspects. The ECMP&R takes initial direction from the Electronic Combat Action Plan (ECAP) but is a much longer range plan than the ECAP. Once fully established, the ECMP&R will replace the ECAP. The ECMP&R establishes its force mix based upon 40 TFWs.

In addition to electronic warfare (EW), EC consists of elements of command, control, and communications countermeasures (C^3CM) and suppression of enemy air defenses (SEAD). EC enhances force survivability exploits weaknesses in an enemy's ability to wage war and applies force against his offensive, defensive and supporting capabilities. The net results of EC include reducing enemy engagement opportunities, increasing time available to counter enemy offensive efforts and reducing attrition. We are requesting $1.9 billion in FY 87 to develop and procure EC systems, including PLSS, TR-1, HARM, EF-111A, Compass Call; modify F-4Es to F-4Gs; provide local, rapid reprogramming capability; develop new or update existing electronic countermeasures pods and internal systems; and provide stocks of expendable chaff and flares.

ALR-74/ALR-56M RWR Competition Program. The ALR-74 evolved as a modification to the ALR-69 to provide radar warning of new and expected Soviet threat systems. Similarly the F-15 ALR-56A required modification (ALR-56C) to cover these new threats. The ALR-56C will be repackaged for the F-16 form/fit (called ALR-56M) and competed with the ALR-74. The winning radar warning receiver (RWR) will be installed in production F-16C/D aircraft and retrofitted in F-4E and RF-4C aircraft. The Navy is also considering joining the competition program in lieu of modifying their ALR-67 RWR. We are requesting $141.8 million in FY 87 to procure RWRs for F-16 and F-4 aircraft.

Electronic Countermeasures Pods. ECM pods are procured to provide self-protection for aircraft that lack internal countermeasures systems. While internal systems are preferable, retrofit costs are prohibitive for many aircraft. As a result, the Air Force has a continuing requirement for ECM pods on aircraft such as the A-7, A-10, C-130, F-16/A/B/C/D and F-4. The FY 87 request for $251.4 million completes procurement of ALQ-131 Block II pods and its power management system, updates 1,300 inventory ALQ-119s to ALQ-184s, and procures standard support equipment for the ALQ-131 and ALQ-184. Additionally, the requested funds will continue funding updates to system support centers.

AN/ALQ-165 Airborne Self-Protection Jammer (ASPJ). To the maximum extent possible, the Air Force attempts to internalize electronic countermeasures systems because of the penalty imposed by external pods. Pods, besides using a weapons station, produce drag and are limited in the coverage their antennae can provide. The Airborne Self-Protection Jammer (ASPJ), designated the AN/ALQ-165, is a joint Air Force/Navy engineering development program for an internally mounted electronic countermeasures (ECM) system. The Navy is the lead service. The ASPJ will provide self-protection and increase the probability of aircraft survivability when various tactical aircraft (F-16, F-14, F/A-18, A-6E and AV-8B) are confronted by modern, diversified, radar controlled weapon systems. Development of associated support equipment, alternate technology and aircraft integration is included in this program. We are requesting $10.1 million in FY 87 for continued development and $189.2 million for procurement.

Integrated Electronic Warfare System. The Integrated Electronic Warfare System (INEWS) is an Air Force led, joint Air Force/Navy program to develop the self-protection suite of the 1990s and beyond for the Advanced Tactical Fighter (ATF), the Navy's Advanced Tactical Aircraft (ATA) and other advanced technology aircraft. INEWS is an outgrowth of the New Threat Warning System (NTWS) which began advanced development in 1979.

The need for an advanced self-protection suite is driven by the technologically advanced threat environment in which the ATF, ATA and other advanced technology aircraft will be forced to operate for their projected life cycles. This threat consists of airborne and surface based defense systems and the command, control, and communications network that links them together. INEWS will provide aircrews timely and accurate threat warning and automatic application of optimum countermeasures, such as in-band jamming and expendable countermeasures (chaff, flares and advanced expendables) to counter this threat. The self-protection suite threat response must be tailored to the specific mission requirement and threat environment. Effective implementation of INEWS demands a defensive capability fully integrated with other aircraft sensors and avionics through and with an avionics architecture; e.g., PAVE PILLAR, to achieve total weapon system synergism. We are requesting $45 million in FY 87 for continued development ($15 million is the Navy portion).

Air-to-Surface Munitions

The wide diversity of military threats facing the US on a global scale requires the Air Force to procure a mix of quality air-to-surface munitions to achieve our theater objectives. For instance, to counter the large number of airfields, armor and air defense systems facing the European theater, we must buy weapons capable of standoff or direct attack and multiple kills-per-pass. For the Pacific, we must buy weapons such as the improved 2,000-pound bomb and alternate warhead Maverick to counter the large number of hardened targets in that theater. These examples show that unique needs must be met by procuring a mix of weapons capable of responding to the most demanding scenario while satisfying the requirements of all theaters. We must design, build and procure weapons that give us the capability to attack around the clock and in quantities to meet both the requirement for initial surge and sustained battle.

Dispenser Munitions. The Air Force is acquiring a series of new dispenser munitions. These include Gator anti-tank mines and the Combined Effects Munition (CEM), currently in production and the Sensor Fuzed Weapon (SFW) and the Direct Airfield Attack Combined Munition (DAACM), which are in development. These systems consist of a submunition which is dispensed from the Tactical Munitions Dispenser (TMD) after release from the delivery aircraft.

Gator consists of the TMD packaged with 94 Gator mines. The mines are air-delivered to control choke points and delay or divert advancing armor. The Gator is part of the Army family of scatterable mines. The Army, as Single Manager for Conventional Ammunition, procures Gator for the Air Force and the Navy. Air Force production is planned to end in FY 87; almost 13,500 total units will be procured. To procure the last 5,768 weapons, $194.2 million is requested in FY 87.

CEM consists of the TMD packaged with 202 Combined Effects Bomblets. It's a direct overflight, area weapon to attack light-to-medium armor, vehicles and personnel with unguided submunitions. The bomblet, in production since CY 83, contains a shaped charge to defeat armor, blast fragmentation for softer targets and personnel, and an incendiary capability. We are requesting $566.7 million in FY 87 to procure 28,850 weapons.

DAACM begins development in FY 86. The munition consists of the TMD packaged with eight Boosted Kinetic Energy Penetrators (BKEPs) and 24 British-developed HB-876 airfield denial mines. The weapon will provide direct attack capability against runways and is planned as a follow-on to the French-built Durandal. We are requesting $17.7 million in FY 87 for continued development.

Sensor Fuzed Weapon. The Sensor Fuzed Weapon (SFW) provides direct attack capability against armor. It will provide increased multiple kills per pass over current anti-armor munitions and can be employed during day, night and limited adverse weather conditions. The SFW is an outgrowth of the Wide Area Anti-armor Munitions Program. The SFW weighs about 1,000 pounds and consists of the Tactical Munitions Dispenser (TMD) packed with ten Skeet submunitions, each containing four Skeet warheads. Individual Skeets, when deployed from the submunitions, flyout radially, scanning the ground for targets. When a target is detected, a self-forging, armor-piercing slug is fired into the target. The program has completed a pre-full scale development, risk reduction phase, and full scale development started in November 1985. Production is planned for FY 89. We are requesting $15.1 million in FY 87 for continued submunition development.

GBU-15/AGM-130. The GBU-15 program procures the modular guided glide bomb for use with the MK-84 (2,000 pound) unitary warhead. Delivery is planned from F-4E and F-111F aircraft with data link guidance providing man-in-the-loop weapon control from launch to target impact. The GBU-15 was designed to provide low altitude launch, modest standoff range and high terminal accuracy for use against high-value point targets.

Both television (TV) and imaging infrared (IIR) seekers have been developed for the GBU-15. The IIR seeker was developed to improve the tactical flexibility of the GBU-15 for night and limited adverse weather capability. The IIR seeker is approximately 90 percent common with the IR Maverick seeker.

A decision was made in FY 83 to approach the Standoff Attack Weapon requirements with a product improvement to the GBU-15. This product improvement will provide a powered GBU-15 (AGM-130/A) with significantly improved standoff capability. It is designed for use with unitary warheads. Additionally, the data link will be improved with added anti-jam capability, and support equipment will be updated for improved efficiency and mobility. The force structure will be expanded for the AGM-130A to include delivery from the F-15E. In FY 87, $139 million is requested to procure 696 GBU-15s, and $44.1 million is requested for continued development and procurement of the AGM-130.

Close Air Support Weapon System (Maverick). Maverick is the Air Force's tactical air-to-surface missile. It provides a high single-shot probability of kill capability against close air support, interdiction and defense suppression targets. The inventory versions are the AGM-65A and B which are television (TV) guided. The TV seekers limit Maverick use to visual contrast conditions (daytime only).

The IIR Maverick program was established to expand the proven Maverick utility to night, limited adverse weather conditions and against a broader spectrum of targets. The Air Force IIR Maverick (AGM-65D) employs an imaging infrared (IIR) seeker and a 125-pound shaped charge warhead. The Navy version (AGM-65F) has the same imaging infrared seeker but employs a 300-pound kinetic energy blast/penetration warhead. This year the Air Force will procure 300 of the planned AGM-65D missiles with the 300-pound blast/penetration warhead like the Navy AGM-65F. The Air Force IR Maverick with the 300-pound warhead will be designated the AGM-65G. We are requesting $586.6 million in FY 87 to procure 4,700 missiles and initial spares.

Air-to-Air Weapons

The efficiency of our fighter aircraft engaged in aerial combat is ultimately related to the effectiveness and availabiliy of their air-to-air weapons. Today our weapons for medium range and short range air-to-air combat are the SPARROW (AIM-7) and SIDEWINDER (AIM-9), respectively. The AIM-7 can be launched from the F-15 and F-4. The AIM-9M can currently be used on the F-15 and F-16. Through the Air Force's self defense aircraft modification program, AIM-9L/Ms will soon be carried on the F-4, F-111, A-7 and A-10 aircraft. We are requesting $64.9 million in FY 87 to procure 379 AIM-7M missiles and $95.6 million to procure 1,710 AIM-9Ms.

As a result of slips in the AMRAAM development program, the Air Force decided to procure additional AIM-7s through FY 88 to be used on existing aircraft and in the future air defense fighter role.

The Soviet Union enjoys a substantial numerical advantage over the US in tactical fighter force structure. Traditionally, the US met this quantitative gap by fielding higher quality weapon systems with greater kill ratios to offset numbers. However, Soviet fighters with enhanced flight and avionics per-formance are entering the Soviet inventory and eroding our qualitative advantage. To retain the superior characteristics of our fighter force, we require a new family of air-to-air missiles that provide improved flexibility, range and lethality. This includes the capability to launch missiles at a target, and then maneuver to evade or engage another target while the fired missile completes the attack, independent of radar and avionics on board the aircraft.

The Advanced Short Range Air-to-Air Missile (ASRAAM) is being developed by the United Kingdom, West Germany and Norway. The ASRAAM will be faster, more maneuverable and will have a higher resolution seeker than the AIM-9. The US will have access to ASRAAM in exchange for AMRAAM data through the provisions of the air-to-air weapons memorandum of understanding (MOU) between the US, UK and FRG. The US currently plans to carry the ASRAAM on the F-15 and F-16, and is considering its potential application to future aircraft.

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is the tactical air force's stated, number one priority and is the next generation missile being developed by the Air Force. AMRAAM will be used by the Air Force, Navy and our NATO allies. Compared to the current Sparrow, AMRAAM is a major advance in missile capability. AMRAAM provides increased velocity, longer range, better maneuverability, a more lethal warhead, improved terminal guidance with an active radar seeker and a larger employment envelope. These characteristics give pilots the capability for multiple launches during a single pass, launch and maneuver capability, and improved electronic counter-countermeasures. The missile will be compatible with all USAF and USN frontline fighters and will also meet NATO requirements for air superiority and air defense aircraft. The missile's characteristics and compatability with both US fighters and those of our allies, will greatly increase survivability and lethality against a numerically superior adversary. AMRAAM capability is absolutely essential to maintain a qualitative edge over Soviet fighter capability in the 1990s.

We are qualifying a second source, follow-on contractor in FY 86. Additionally, we have begun the producibility enhancement program and are continuing the flight test program. In FY 87, we seek $756.8 million for the Lot I, low rate initial production, (260 missiles) and advance procurement. We also request $39.1 million for the continuation of full scale development.

Chemical Warfare

The Soviets consider chemical warfare one of the strengths of their forces and maintain a considerable chemical warfare advantage over the US and the NATO Alliance. The Soviet chemical industry has the capability to produce toxic agents at a rate sufficient for military requirements. A large quantity of agents is stored in at least nine chemical depots located throughout the USSR. Chemical warfare research and development continues; several new facilities were constructed at their chemical agent proving grounds since the late 1970s. In short, the substantial Soviet advantage in chemical warfare continues to grow.

The Air Force must plan to defend against the effects of chemical warfare and also achieve the capability to retaliate in kind. Current defensive protective gear provides adequate protection, but causes problems such as induced heat stress, restricted movement and vision, and degraded communications. Some tasks, already difficult under combat conditions, become almost impossible, and many simple tasks take longer, resulting in far fewer sorties. Better protective systems must be developed to allow our forces to operate more efficiently during and after a chemical attack.

The FY 87 Chemical Warfare Defense Program request for $219.4 million continues the development and procurement of masks; improved protective gloves and clothing; advanced chemical agent detection and warning systems; survivable collective protection systems and new decontamination equipment. However, the development of better defensive equipment alone cannot be considered an adequate deterrent. Even with improved equipment, the Soviets can create a significant advantage if we are forced to operate under protective conditions. In fact, our lack of effective retaliatory capability and the reduced efficiency of operations in protective gear, provide the Soviets with a powerful incentive to use chemical weapons. Our present capability is extremely limited and can no longer be considered an effective deterrent. An effective retaliatory capability, combined with a strong chemical defense, will provide a credible deterrent. Both elements, defensive and retaliatory, are essential capabilities. We are requesting $28.4 million in FY 87 for procurement of the Bigeye Binary Chemical weapon and $2 million for continued research and development of a standoff chemical munition.

Tactical Command, Control, Communications and Intelligence

As in the strategic area, command, control, communications and intelligence (C^3I) is vital for successful tactical operations. We rely heavily on C^3 to disseminate intelligence and sensor information, to coordinate and mass forces, and to direct actions against the enemy. The 1973 Middle East War and Air Force and NATO exercises show jam-resistant, air-to-air and air-to-surface UHF and VHF voice communications are essential for effective command and control. To support this requirement, we are requesting $89.4 million for development and procurement of improved HAVE QUICK (jam-resistant UHF) and SINCGARS-V (jam-resistant VHF).

Data communications are essential for distributing detailed information throughout the battlefield. The Joint Tactical Information Distribution System (JTIDS) will provide jam-resistant, secure communications using a digital data link. We are requesting $113.9 million in FY 87 to begin procurement of CLASS II terminals for the F-15.

The ground-based tactical air control system (TACS), deployed in the late 1960s and early 1970s, faces several major problems. Lack of survivability, increasingly difficult logistics supportability, limited mobility and saturated computers are problems we must resolve. The main improvement will be Modular Control Equipment (MCE) to replace many control segments and provide the hardware baseline for the Ground Attack Control Center (GACC).

Introduction of new collection systems and the need to disseminate intelligence in a near real-time mode to battlefield decision makers, make the rapid correlation, analysis and dissemination of multiple source intelligence essential to effective warfighting. The Joint Tactical Fusion Program's Enemy Situation Correlation Element (ENSCE) will provide an automated capability to receive, analyze and disseminate critical intelligence. The ENSCE and the Army counterpart, All Source Analysis System, will give the battlefield commanders a common and shared picture of the air and ground battle.

The Air Force joined the existing Marine Corps TAOC-85 program in 1982 that provided significant funding, schedule and interoperability benefits. The GACC is a software modification effort to the MCE that will help the TACS control the air attack of time-sensitive mobile ground targets. GACC is part of the larger OSD joint interdiction program. We will use the $88.9 million requested in FY 87 to continue the MCE Preplanned Product Improvement Program (P^3I), continue the GACC development and procure three MCE operation modules.

Tactical C^3 Survivability. The survivability of our tactical C^3 equipment depends on being able to disperse the equipment and to minimize radar signature patterns. In both cases, our tactical C^3 equipment is deficient. Radio and radar remoting is currently limited, increasing the Anti-Radiation Missile (ARM) threat to the operations centers. We cannot currently disperse elements of the operations centers, and radars are vulnerable to an ARM threat from the energy radiated in sidelobes and backlobes. Air Force tactical C^3 programs seek to correct these deficiencies.

The Ultra-Low Sidelobe Antenna (ULSA) program will produce a slotted waveguide antenna reducing the amount of sidelobe and backlobe radar energy on which an ARM could guide. ARM alarm sensors will provide warning when missiles approach the radar. The ARM decoy program provides decoys, deployed several hundred meters from the radar to lure the incoming ARMs away from the radar. We are requesting $45.2 million in FY 87 to continue the development and acquisition of these survivability features. Additionally, modular control equipment (MCE) will let us disperse C^3 operations centers to complicate an adversary's detection and location of these critical command centers.

Critical and unique USAFE intelligence activities and equipment are considered highly vulnerable to enemy attack. The Combat Targeting Center (CTC) will begin construction in 1987 and will house the critical warfighting equipment and activities of the Combat Operations Intelligence Center and the 497th Reconnaissance Technical Group in a hardened facility.

Combat Identification Systems

Combat identification is the basic process of determining which forces are friendly or foe. We have come a long way from the days when simple visual identification was the only method to discern friends from enemies. Today, the multitude of forces that may be involved, combined with the influence of sophisticated electronic jamming systems, work to make identification a difficult process.

In the European theater, combat identification will be critical to achieving NATO objectives in any conflict with Warsaw Pact forces. The Air Force's role of achieving air superiority and supporting ground forces is essential if we are to defeat clearly numerically superior opposing forces. This air superiority will have to be achieved in a situation where hundreds (and perhaps thousands) of aircraft will be engaged in a relatively limited space. Aerial combat effectiveness can also be improved if the identification capability extends beyond the visual range but remains within range of advanced air-to-air missiles.

We are developing the Mark-XV (MK-XV) Identification Friend or Foe (IFF) system. The MK-XV will offset deficiencies in the current MK-XII, and be sized to fit into the space now allotted to the MK-XII to facilitate modifying our existing aircraft. When deployed, the MK-XV will be one part of an enhanced air combat capability for intense aerial combat environments and for beyond-visual-range employment. In FY 87, $12 million is requested to procure hardware and $6.3 million is requested to continue research and development efforts in advanced noncooperative identification techniques.

Noncooperative techniques do not require the unknown aircraft to knowingly respond to the weapons platform in order to be identified. These techniques include dual mode recognition (DMR) and multi-source integration (MSI) that fuses information from several identification sources to reduce pilot workload and enhance situational awareness. In addition, several advanced techniques are being pursued in the laboratory for potential development in weapons platforms.

Ground Launched Cruise Missile

Modernization efforts include 464 Ground-Launched Cruise Missiles (GLCMs) in five NATO countries. GLCM provides a deep strike capability that improves the theater commander's flexibility by allowing dual capable fighter aircraft to be used in the conventional role for a longer period before committing them to nuclear roles during high states of readiness. As a result of its mobility, low altitude flight profile and small radar cross section, the GLCM possesses high pre-launch and enroute survivability while compounding the enemy's targeting and defense problems.

The deployment of GLCM in Europe continues as scheduled. Missiles are operational at Greenham Common, United Kingdom; Comiso, Sicily; Florennes, Belgium; and deployment plans are on schedule for the Federal Republic of Germany. Also, the government of the Netherlands has made the political decision to accept the deployment of GLCM at Woensdrecht. In FY 87 we are requesting $148.9 million to purchase missiles, continue required R&D and provide initial spares.

We are requesting $61.7 million in FY 87 for military construction, a major part of which will support accompanied tours in Europe. Accompanied tours will provide personnel stability and continuity while establishing an experienced manpower base. Without accompanied tours, retention and low experience levels will become chronic problems in GLCM units. The prospect of frequent unaccompanied assignments in European areas, a location where others are usually assigned with their families, will provide a strong incentive for GLCM personnel to leave the GLCM program or the Air Force.

Unaccompanied tours lower mission effectiveness; e.g., higher personnel turnover/lower experience level and higher incidence of drug, alcohol and discipline problems. Additionally, unaccompanied tours cost more after five years of operating a base, due to lower personnel retention in the Air Force and higher costs for training, temporary duty and permanent change of station. FY 87 funds are required for permanent construction to replace interim facilities. Additionally, $9.4 million in housing funds is requested for family housing in Belgium (250 units build-to-lease) and Germany (100 units) to support GLCM accompanied tours.

SPACE

US national security interests are heavily dependent on space-based assets, and this dependence is growing. Space systems support the strategic and conventional forces of all US services world-wide by providing vital communications links; weather information; surveillance and warning; and navigational support.

Objectives in Space

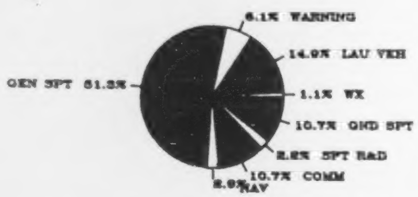
The Air Force is charged with organizing, training, and equipping forces to use space to support our national security objectives and to deny the use of space for purposes harmful to the United States and its allies. Our basic military objectives in space are to:

- Pursue research concepts that potentially have a high military payoff and would place the US in a favorable strategic posture
- Maintain an unmanned launch capability to complement the US Space Shuttle
- Identify methods to increase the reliability, maintainability and survivability of our space assets
- Achieve an operational antisatellite capability to deter Soviet attacks against our satellites in orbit
- Continue exploiting the unique attributes of the Space Shuttle as they relate to military applications in space

Our FY 87 program depicted below builds on the evolutionary progress we've made in developing space systems to support these objectives. We must make full use of opportunities to support the entire spectrum of national security missions when space assets represent the most effective and efficient means to do so. The proposed FY 87 Air Force budget request for space activities is approximately $11.4 billion, or about 10.9 percent of our total request. This total is an aggregate, consisting of all the specific budget items in the various mission categories of our space program.

FY 87 SPACE BUDGET

PERCENT BY FUNCTIONAL AREA



TOTAL REQUEST = $11.4B

This component of our budget does not come at the expense of other missions. No specific systems have been cut or curtailed because of the space program, unless the mission of that system was fulfilled in some other way.

Soviet Space Threat

The Soviets practice a combined arms concept of warfare in which all types of forces are integrated into military operations to achieve desired goals. Space assets play a major role in this equation, in the areas of antisatellite warfare; intelligence collection; command, control and communications; meteorological support; navigational support; and targeting.

In recent years the Soviets' space budget has grown 10 percent annually, exceeding the growth rate in their overall military budget. This makes their space program one of the fastest growing components in their defense effort and reflects the growing importance of space systems in their military planning.

Over the past decade, the Soviets have launched four to five times as many satellites as the US. In 1985 alone, the Soviet Union had nearly 100 launches compared to only 18 launches by the United States. More than 70 percent of the Soviet launches carried strictly military payloads, and many of the rest were combined civil-military missions.

The Soviets have emphasized man in space since the beginning of their space program. In 1961, they placed the first man in orbit. Since the 1970s, they have accumulated four times as many man-years in space as the US. The Soviet space station SALYUT-7 is manned during most of the year, and the Soviet cosmonauts aboard are engaged in military-related experiments. This gives the Soviets the capability to perform a variety of functions from space, including military R&D, reconnaissance, operation of weapons and sensors, and other military missions.

The Soviets currently maintain eight space launch systems to place objects in orbits ranging from low-earth to geosynchronous and beyond. They are developing boosters capable of orbiting payloads weighing up to 220,000 pounds to low earth orbit, giving them a tremendous capability to orbit heavy objects such as components for a large, manned space complex. Current evidence indicates that the Soviets are developing a reusable space system similar to the US Space Shuttle and a smaller space plane. Orbital development flight tests of the smaller vehicle have already occurred. These systems could be in regular use within a decade and will further expand the military flexibility and capability of the Soviet Union.

The Soviets had the first space weapon, a Fractional Orbit Bombardment System in the 1960s, and today have the world's only operational space weapon, a co-orbital antisatellite (ASAT) weapon system. This system has given the Soviets the capability to attack satellites in near-earth orbit since 1971. The Soviet ASAT can attack a target in various orbits during the ASAT's first two revolutions. An intercept during their ASAT's first orbit would minimize the time available for evasive action. The Soviet ASAT can reach targets orbiting at more than 5,000 kilometers, but it is probably intended for high-priority satellites at lower altitudes.

Since the Soviet Union has an operational capability to destroy satellites while the US does not, the current situation is unstable. During a crisis or conflict, the

Soviet Union could attack US satellites without fear of a response in kind by the US. At present, the US does not have a direct, immediate and non-escalatory deterrent that the Soviets would have to consider in any decision to employ their own ASAT system.

The Soviet Union also leads the US in high-energy laser development. The Soviets have built more than a half-dozen major laser R&D facilities and test ranges. More than 10,000 Soviet scientists and engineers are associated with laser development. In contrast, the United States, until last year, had done only minimal research in the field since 1972.

There is a growing threat posed by present and prospective Soviet satellites which, although not considered weapons, are designed to directly support the USSR's terrestrial forces in the event of conflict. These include ocean reconnaissance satellites that use radar and electronic intelligence to provide targeting data for attacking US and allied surface fleets. They also include photographic and electronic intelligence satellites that provide targeting data and other information useful in supporting Soviet land forces. These Soviet space assets constitute a clear threat to the national security of the US and our allies.

In sum, Soviet initiatives indicate an apparent goal to achieve military superiority in space, consistent with their history and doctrinal statements. Their R&D suggests significant growth; e.g., a heavy lift booster with a capacity five times the US's largest; an aggressive laser and particle beam program; a potential space-based laser in 5-10 years; and a manned space facility with the potential to handle 100 people by the mid-to-late 1990s.

Space Organizations

Unified Space Command. The Air Force strongly supported the President's November 1984 decision to form a unified space command. The United States Space Command (USSPACECOM) was activated in Colorado Springs, Colorado on September 23, 1985, and the Air Force was designated as the executive agent.

USSPACECOM provides a necessary link between the National Command Authorities and our current space forces for employment and command and control in wartime. The Air Force has consistently maintained that a multi-service operational command was necessary, since space systems provide critical support to all the Services. The establishment of this new command is not a further "militarization" of space; it simply provides a new structure to clarify command arrangements for space in peace and the transition from peace to war. Space systems, like land, sea, and air forces, are best employed through a unified/specified command structure. USSPACECOM provides this structure and ensures the most efficient and effective support of the space assets for national objectives.

This new organization offers the opportunity for rapid strides in a more fully coordinated DoD space program for improving existing C^3 in space and establishing new capabilities. Full support by the Service components is needed to quickly address and resolve long-term interoperability issues and to develop innovative approaches to providing C^3I support of our objectives in space.

Air Force Space Command. The Air Force Space Command (AFSPACECOM), also located in Colorado Springs, is a component of the new unified command, and employs approximately 30,000 military and civilian personnel trained in various space operations and support roles. AFSPACECOM's 1st Space Wing operates a world-wide network of missile warning and space surveillance units and two operational satellite systems. The command's 2nd Space Wing was established in July 1985 and will manage satellite and shuttle control activities from the Consolidated Space Operations Center (CSOC), the hub of US military space operations.

The Consolidated Space Operations Center is in full scale development. The facility construction phase of the CSOC program was completed at Falcon AFS, Colorado, in September 1985. The CSOC will consist of two major operational elements, the Satellite Operations Complex (SOC) and the Shuttle Operations and Planning Complex (SOPC). The Satellite Operations Complex will provide tracking, telemetry and commanding services to DoD satellites by operating in parallel with the Air Force Satellite Test Center (STC) at Sunnyvale, California. The SOC and STC will share the satellite control workload of the Air Force Satellite Control Network and provide emergency back-up capability to each other. We are requesting $153.8 million this year for development and procurement of the SOC and supporting CSOC systems. We expect to achieve an initial operational capability for satellite control in mid-FY 87.

The SOPC will conduct flight planning, readiness and control operations for DoD Shuttle flights by operating in parallel with NASA's Johnson Space Center (JCS) which can not meet DoD Shuttle requirements by itself. SOPC and JSC will share the planning, readiness and control workload of the National Space Transportation System (Shuttle) program and provide emergency back-up capability to each other. The FY 86 Authorization Bill required the Air Force to report to Congress on how SOPC will be executed. The Air Force is preparing a report showing how the austere SOPC will be able to provide a limited mission planning capability in FY 89 and a limited mission control capability in FY 92. We are requesting $25 million in FY 87 to continue development and begin procurement of the SOPC.

Air Force Space Command's (AFSPACECOM) formation required a clarification of roles and responsibilities between the Air Force Systems Command (AFSC) and the Air Force Space Command. In the past, the division of responsibilities for space systems was based on a clear division between the operator and developer. AFSC is the major air command responsible for research, development and acquisition (RD&A). AFSPACECOM was formed to consolidate operational space activities and provide a link between RD&A activities and operational users. To formalize this relationship, the two commands signed a memorandum of understanding which transfers operational activities to AFSPACECOM and retains classic RD&A responsibilites at AFSC's Space Division. This arrangement will normalize space operations, maintaining the benefits obtained by separating the acquirer from the user.

Assured Access to Space

Because space offers the most cost effective and, in some cases the only alternative for required defense capabilities, DoD must maintain an assured access to space. The military remains fully committed to the Space Shuttle for its primary access to space. The programmed Shuttle fleet, however, cannot provide the assured access to space essential to our national security. For example, if the orbiter fleet were to be grounded for just six months in the early 1990s, it would take the nation two years at the nearly impossible surge rate of 30 flights per year to make up the lost ground.

Consequently, the President established national policy specifying DoD must "....pursue an improved, assured launch capability to satisfy two special requirements—the need for a launch system complementary to the STS to hedge against unforeseen technical and operational problems and the need for a launch system suited for operations in crisis situations." To accomplish this, DoD will acquire "a limited number of ELVs to complement the STS."

Complementary Expendable Launch Vehicles. To provide an assured launch capability for selected critical satellites, we are upgrading the design of the existing Titan 34D to complement the Space Shuttle. The complementary expendable launch vehicles (CELVs) will assure access to space when launching the manned Shuttle under crisis conditions would be considered too risky or if the Shuttle were not available to meet launch-on-demand requirements. Congress authorized money in FY 86 to fully fund one CELV and invited the Air Force to submit a multi-year procurement package. Our FY 87 budget requests $400.5 million for continued CELV development and procurement. If Congress approves multi-year, we plan to use $282.7 million of this amount to continue CELV procurement in FY 87. We plan our first launch from Cape Canaveral AFS, Florida in October 1988.

The DoD believes the acquisition of CELVs will have little or no impact on STS costs to the Government. The two potential shuttle missions a year that the CELV program represents, will be less than ten percent of NASA's flight activity in the late 1980s through early 1990s time frame. With increasing commercial space interests and the newly developing Space Station and SDI programs, there is high probability that much or all of this vacant payload space on the Shuttle will be filled.

Space Launch Vehicles. The Air Force plans to capitalize on its deactivated Titan II ICBM assets by converting them to space launch vehicles (SLVs) for small, unique orbiting DoD satellite programs. The program will refurbish Titan IIs to support launches in the FY 90-FY 98 period for the Defense Meteorological Satellite Program (DMSP), a classified satellite program and the Navy's Remote Ocean Sensing Satellite. The Titan II SLV will provide a launch-on-demand capability for small DoD satellite programs at low cost, with no impact to the current Shuttle manifest.

SLV acquisition will not impact DoD Shuttle reimbursements to NASA. DoD Shuttle flight commitments to NASA currently cover DoD missions flying on the Shuttle through FY 88, and DoD has committed to using one-third of the Shuttle capacity. All satellites projected to use the Titan II SLV were never manifested on the Shuttle. In summary, the Titan II SLV offers an efficient and economical means of placing small payloads into unique orbits, with no impact to the Shuttle program.

Future Requirements. The Air Force, NASA and the Strategic Defense Initiative Organization have evaluated payload requirements for launch vehicles for both the near term (late 1980s-early 1990s) and far term (mid 1990s-early 2000s), and have determined that there are no defined requirements for a heavy lift launch vehicle until at least the mid-to-late 1990s. The Space Shuttle and CELV will satisfy payload needs for at least the next decade.

The Air Force and NASA are jointly studying the requirement for a post-1995 second generation space transportation system. This effort will investigate advanced propulsion concepts such as advanced airbreathing propulsion and the ground operations aspect of space launches, with the goal of significantly reducing current launch costs. Additionally, the capability to meet expected requirements for heavy payloads (up to 150,000 pounds) will be addressed. The Strategic Defense Initiative (SDI) and a space station are the two most likely potential sources of a heavy lift requirement. An SDI program, for example, involving very heavy payloads, a high launch rate, or both, would require a more cost-effective launch technology than is embodied in either the Shuttle or current CELVs.

Satellite Survivability

The Soviet ASAT and other developing technologies pose a distinct threat to US satellite systems. Because we depend heavily on space systems for many defense functions, systems designers and operators consider survivability against threats as an important space system characteristic. The goal is to make our satellites as survivable as the forces they support, across the full range of conflict.

Today, some operational satellite systems employ radiation hardening, on-orbit sparing, anti-jam communications and attack detection sensors to increase their survivability. New satellites currently in development will employ the present survivability features when possible. In addition, they will benefit from laser hardening, distributed satellite constellations (with communications cross-links), attack warning sensors, autonomous switching of redundant on-board equipment, attack avoidance maneuvering capability, and COMSEC protection for the down links and command uplinks. Ongoing technological efforts will examine improvements to all of these survivability techniques and will look at the feasibility of active defensive measures.

Survivability enhancements such as these are not a substitute for an antisatellite (ASAT) capability. Survivability measures aim only to preserve systems and their capability once they are under attack. The ASAT, on the other hand, can deter such attacks on our space systems through its retaliatory capability to deny an adversary assured use of his space systems. In the face of the existing Soviet threat, the deterrent effect of a proven operational US ASAT system is essential to the security of our space operations.

Support for the Space Transportation System

Our FY 87 budget includes approximately $1.3 billion for projects associated with operation and development of the Space Transportation System (STS). The Air Force is fully committed to using the STS as its primary access to space. From the earliest stage of the Space Shuttle program, we have worked as DoD executive agent with NASA to develop the Shuttle and ensure its usefulness for DoD missions. DoD plans to use at least one-third of all Shuttle flights over the next ten years for military missions.

The Air Force continues to work closely with the National Aeronautics and Space Administration in developing the Space Shuttle as a means of routine access to space for commercial, private, government (including DoD) and foreign users. We developed and procured the Inertial Upper Stage to boost payloads in the 5,000-pound class to orbits beyond the capability of the Shuttle and are continuing work with NASA to develop the higher energy Centaur upper stage to boost DoD payloads in the 10,000-pound class to geostationary orbits and beyond. We also are continuing engineering and design programs to transition DoD satellites to launch compatibility with the Shuttle.

This year's budget contains approximatley $400 million to support the West Coast Space Shuttle Launch Facility at Vandenberg AFB, California. Construction of the Vandenberg launch site is now essentially complete, and the site was activated for testing in October 1985.

The first Shuttle mission from Vandenberg has been rescheduled to mid July 1986 to permit us to complete ongoing modifications, inspections, rework and operational testing. We plan two Shuttle launches from Vandenberg in 1986 and additional launches at the rate of two to four a year beginning in 1988. This schedule, of course, may be affected by the outcome of the investigation of the Challenger accident.

Space-Based Systems

Space systems provide communications, surveillance, navigation and weather observation capabilities vital to our daily military operations with accuracy and at a cost that would otherwise be impossible with a ground-based capability. In addition, the National Command Authorities rely on space-based sensors to detect strategic missile launches and incoming warheads that would signal a nuclear attack on the United States.

US military space assets require a coherent and responsive organizational structure. We believe the transition from the fragmented command arrangements of the past to the centralized direction provided by the Air Force Space Command and the US Space Command is a significant improvement in the organization of military space systems. We're confident this centralization will lead to more efficient and responsive employment of space-based resources in contingency and combat operations.

Communications Satellites. The Air Force Satellite Communications (AFSATCOM) System is currently one of our primary means for command and control of our strategic forces. AFSATCOM consists of aircraft terminals, ground terminals and communications packages on several satellites. AFSATCOM is scheduled to be phased out in the early 1990s.

In 1983 we began full scale development of Milstar, the next generation of communication satellites, to provide improved, more survivable and highly jam-resistant communications in the extremely high frequency range. Milstar is a joint Service program which will support both tactical and strategic users. Our budget this year includes $842.5 million for development and procurement of this urgently needed system.

The Defense Satellite Communications System (DSCS) is an evolutionary DoD system providing Super High Frequency (SHF) satellite communications for secure voice and high data rate transmissions. DSCS provides unique and vital communications for world-wide military command and control, crisis management and presidential and diplomatic traffic.

DSCS III, the latest DSCS satellite design, provides added flexibility through electromagnetic pulse (EMP) hardening and increased jam-resistance capability. DSCS III will support strategic forces by providing a UHF/SHF capability for emergency action message dissemination and force execution through an AFSATCOM single Channel Transponder. The fixed-price, multi-year contract we awarded in 1983 for seven DSCS III satellites is on track and will save $139.8 million compared to annual procurements. We are requesting a total of $136.7 million for DSCS procurement and development this year.

Navigation. The Navstar Global Positioning System (GPS) is a spaced-based radio navigation system designed to provide military users with world-wide, all weather, three-dimensional position, velocity, and precise time information. The firm, fixed-price, multi-year contract for 28 GPS satellites awarded in May 1983 is on schedule. Launches will begin this year, leading to a 24-hour per day worldwide GPS capability for military and civilian users by the end of 1988. This schedule depends upon Shuttle availability as currently planned. Our budget this year requests $309.2 million for continued development and procurement of this system.

Meteorology. The Air Force is the executive agent for the joint service Defense Meteorological Satellite Program (DMSP). DMSP is the DoD's single most important source of global weather data. The multi-year procurement (MYP) contract we negotiated in 1983 for four spacecraft and imaging sensors is on track, with savings of $58.2 million over the traditional annual buy approach. Space Division plans a follow-on MYP of five satellites in FY 88-90. Our budget request this year contains $89.5 million for DMSP development and procurement.

INSTALLATIONS

The condition of our facilities directly affects combat capability. Runways, taxiways, aircraft shelters, missile silos, launch control centers, and maintenance hangars and shops must be as ready to function during hostilities as the people and the systems people operate. Structures, such as medical facilities, troop housing, dining halls and community/recreational facilities, provide for our people's basic needs, contribute to their morale and welfare and help us retain quality people.

Funds for repair and maintenance are included in the operation and maintenance (O&M) appropriations. Our O&M funding shortages in the mid-to-late 1970s resulted in a deteriorated physical plant and large backlogs in equipment and facility maintenance. In spite of some increased funding and congressional actions to correct this negative trend, the condition of our installations has only begun to improve.

In the continuing effort to make Air Force bases better places for our people to live and work, we participate in the DoD Model Installation Program. The Model Installation Program tests innovative methods of improving the way we manage base operating support services.

Military Family Housing

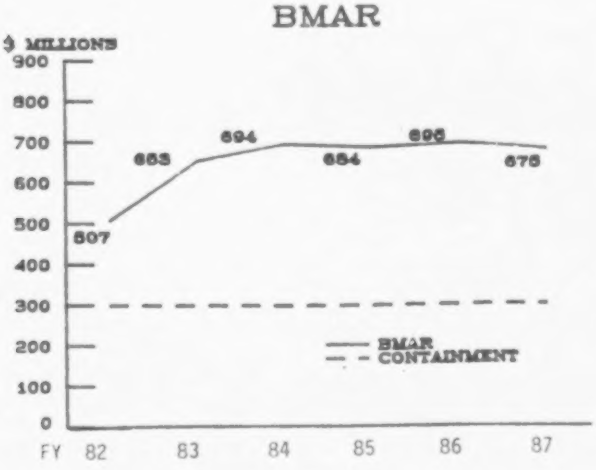
The cost, quality and availability of housing for military families is a major concern for the Air Force. Family housing ranks at the top of the list of importance to our married members. When housing is not available in local communities or is too costly for our families to afford, the Air Force constructs housing units on or near the bases. The Air Force currently owns and operates nearly 138,000 housing units in the continental US (CONUS) and overseas for military families. Air Force members will forego more than $666 million in Basic Allowance for Quarters and Variable Housing Allowances or Rent Plus to live in Air Force owned or operated housing. Therefore, they expect a reasonable, well-maintained residence in return.

Today, most Air Force families assigned in the CONUS are adequately housed either on base or in local communities. In a few isolated locations and some large urban areas, housing is just not available, and new or additional government housing must be provided. Overseas the housing problem is much more severe. The Air Force currently has a 30,000 unit housing deficit, with the majority occurring at 29 bases. All too often, our families must live in inadequate, substandard and unsanitary conditions in order to maintain family integrity. Frequently, the only housing available is located more than an hour away, over narrow, dangerous roads where winter weather creates a major driving problem. In other areas families don't have potable water or adequate sanitary systems; streets are unimproved; and security of their homes, vehicles and possessions is marginal. In FY 87 we are requesting $853.1 million to construct, improve, lease, operate and maintain family housing. These funds will provide 523 new units, along with housing support facilities at various locations.

Real Property Maintenance Activity

The Real Property Maintenance Activity (RPMA) program operates and maintains our 118 major and 2,700 minor installations throughout the world. RPMA resources are primarily devoted to the "must pay" activities required to keep our bases open. About 85 percent of the RPMA budget goes to utilities, crash rescue, fire protection, snow removal, rents, leases, custodial services, and routine maintenance and repairs. We use the remaining funds for contracted facility projects to preserve and extend the useful life of our physical plant, currently valued at over $115 billion. We are requesting $3 billion in FY 87 for RPMA.

The condition of our physical plant directly contributes to Air Force readiness and sustainability. The backlog of maintenance and repair (BMAR) level is used as an indicator of facility condition and funding adequacy. Congress has directed a BMAR containment level of $300 million in an effort to reduce the backlog to a manageable level, about six months work. By the end of FY 87 we project the BMAR to be about $675 million in deferred facility requirements or approximately $375 million above the congressional containment level. The congressional additions to RPMA in FY 85 ($65 million) and FY 86 ($35 million) along with funding from other unexecutable O&M programs, arrested the previous upward trend and essentially kept the backlog from growing above the FY 84 level. The budget request for FY 87 continues that same level of backlog; i.e., it is sufficient to meet new requirements but not sufficient to make a sizeable reduction in the backlog. The Air Force hopes to allocate sufficient funding for facility projects, to achieve significant reductions in the backlog beginning in FY 88.



Military Construction Program

Military Construction Program (MCP) funds support new and increased missions and readiness as well as quality of life and workplace improvements. Our active forces MCP request is broken down into the categories shown below.

MILITARY CONSTRUCTION PROGRAM (MCP) FUNDING
($Millions)

	Appropriations		Request
	FY 85	FY 86	FY 87
Systems Acquisition	542	629	588
Readiness	60	46	120
Quality of Life	334	281	222
Upgrading the Workplace	582	606	700
Planning and Design	165	149	143
General Cost Reduction	(-110)	(-48)	-
Total	1,573	1,663	1,773

The Systems Acquisition category contains major facility investments to support deployment of Peacekeeper; command, control and communications; Cruise Missile; Ground-Launched Cruise Missile; and B-1B. The Readiness category includes facilities for USCENTCOM support in Southwest Asia and operational facilities in Europe and the Pacific, such as chemical warfare protection, munitions storage and fuel storage. The next two categories, Quality of Life and Upgrading the Workplace, include the facilities where our people live, work and play, such as dormitories, maintenance shops and gymnasiums.

Many of our existing facilities are obsolete. Until recently, we have not had enough funds for projects to address quality of life and the workplace. We have had to satisfy higher priority readiness, sustainability and systems needs first. Increased funding reflected in FY 85, FY 86 and FY 87 supports our goal of reducing our backlog of projects to support quality of life and the workplace.

Installation Restoration Program

The Air Force Installation Restoration Program (IRP) is a four-phase program to identify the locations and contents of past toxic or hazardous waste sites on currently or formerly owned/used property and to eliminate the hazards in an environmentally responsible manner. Federal law (Superfund) requires this cleanup by private industry and federal agencies. Executive Order 12008 requires DoD to comply with environmental requirements and to request the necessary funds for cleanup. This is currently done through the Defense Environmental Restoration Account. Current estimates of the total DoD cost of these cleanups, which have been provided to Congress and reported by the General Accounting Office, are $5-$10 billion, with Air Force cleanup costs accounting for approximately 30 percent of this total.

Congress was critical of the pace of DoD's cleanup efforts in both FY 84 and FY 85 and appropriated $150 million in FY 84, and $314 million in FY 85, in response to DoD's request for $59 million and $234 million respectively. Last year, the Defense Resources Board (DRB) reacted to a combined Service POM submission of $105 million by establishing a DoD budget request of $329 million. The Air Force sought and received greater than a proportionate share of these funds during this time period; i.e., $48.8 million in FY 84, $126.6 million in FY 85, and $114.6 million in FY 86. In FY 87 DoD is requesting $95 million to fund required studies and cleanup actions.

NATO Infrastructure Funding and Allied Contributions

FUNDING ($Million)	NATO Infrastructure Program				
	Slice 34	Slice 35	Slice 36	Slice 37	Slice 38
US (Europe)*	213.0	213.4	471.6	234.2**	TBD
Air Force	129.6	118.1	180.0	149.0**	183.0***

US PREFINANCING (as of Sep 1985)

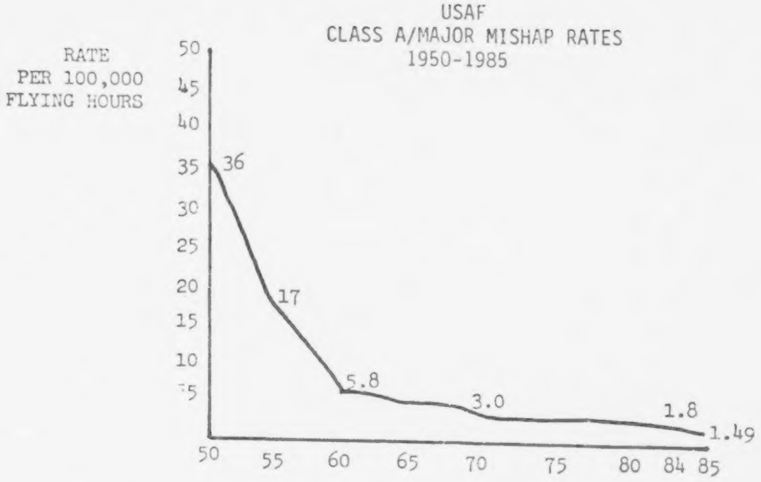
	TOTAL	RECOUPED	BALANCE
US (Europe)*	573.6	376.4	197.2
Air Force	388.0	226.1	161.9

*Excludes SACLANT
**Recommended but not approved
***USAFE estimate

The NATO Common Infrastructure Program is funded by member nations who contribute an agreed percentage to a six-year cost share period termed a "Slice Group." The US share is 27.82 percent; yet, historically, the US has received a larger percentage in funded projects. The six-year Slice Group is divided into individual slices for programming purposes. The previous Slice Group, 31-35, was funded at 1.2 billion infrastructure accounting units (IAU), or $3.2 billion. The level of this Slice Group prevented the funding of NATO-eligible projects such as collocated operating bases (COB), minimum essential facilities (MEF) and semi-hardened aircraft shelters for tactical air reinforcements. The Air Force accelerated the construction of these vital facilities by prefinancing them, resulting in a large backlog of unrecouped NATO-eligible projects.

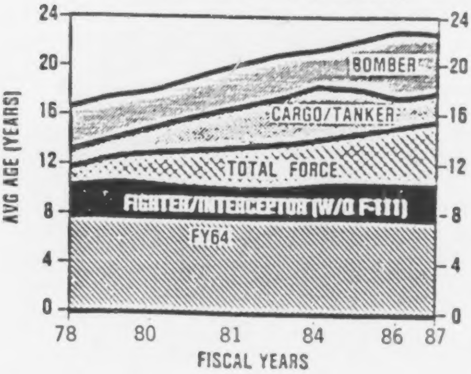
NATO Ministers agreed to fund the current Slice Group (36-41) at 3 billion IAUs during their December 1984 meeting in Brussels. Given the 3 billion IAU ceiling, it will be possible for the Air Force to recoup most of the $112 million in prefinanced aircraft shelters and get COB MEF completely funded over the six-year period.

Fiscal Year 1986 congressional reports continue to stress the need to complete the recoupment of all prefinanced projects. Defense Guidance has restricted prefinancing to the extent that the recoupment balance is being significantly reduced. The DoD goal is to obtain NATO programming for all recoupments in the current infrastructure funding cycle (Slices 36-41).



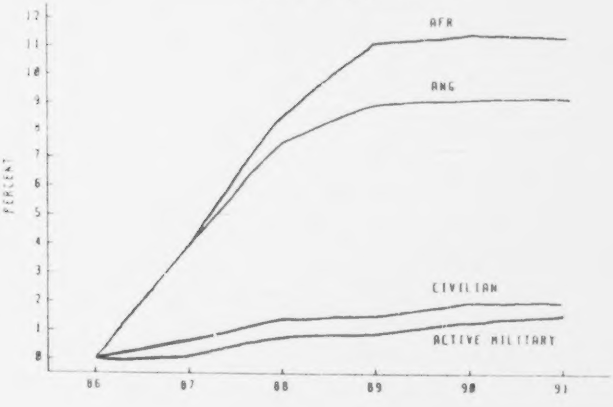
USAF
CLASS A/MAJOR MISHAP RATES
1950-1985

AIRCRAFT INVENTORY
PROJECTED AVERAGE AGE

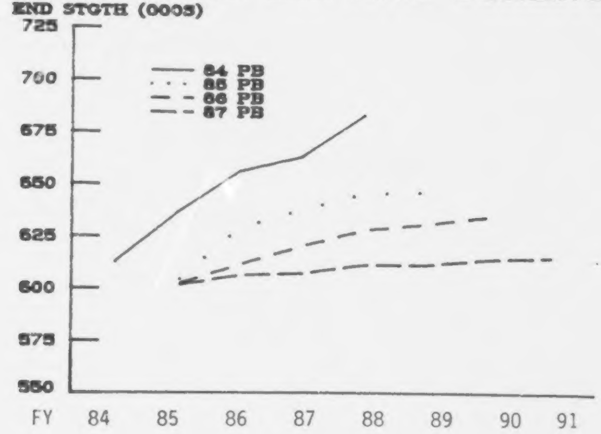


MANPOWER

RELATIVE GROWTH



REQUESTED MIL END STRENGTH



SUMMARY OF APPROPRIATIONS (TOA)
(Then Year $ Billions)

APPROPRIATION	FY 1985[1]	FY 1986	FY 1987
Aircraft Procurement	26.1	23.0	19.1
Missile Procurement	8.4	8.3	9.0
Other Procurement	8.8	8.6	10.9
RDT&E	13.5	13.8	17.3
MILCON			
AF	1.6	1.7	1.8
AFR	.1	.1	.1
ANG	.1	.1	.1
O&M			
AF	19.2	20.2	21.2
AFR	.9	.9	1.0
ANG	1.8	1.8	1.9
MILPERS			
AF	18.1	19.0	19.3
AFR	.6	.6	.6
ANG	.9	1.0	1.1
Stock Fund	.5	.4	.2
Family Housing	.9	.9	.9
TOTAL TOA*	101.5	100.3	104.5

* Numbers may not add due to rounding

[1] Includes $1.5 billion obligation authority for Peacekeeper from original Appropriation position

SELECTED KEY PROGRAMS
(Millions of $)

AIRCRAFT (3010)(3600)	RDT&E	PROC*	(QTY)	TOTAL
B-1B	119	0	(0)	119
C-17	612	217	(0)	829
C-5B	0	1,937	(19)	1,937
MC-130H	19	245	(5)	264
F-15	213	1,894	(48)	2,103
F-16	83	3,494	(216)	3,575
KC-10A	0	104	(8)	104
TR-1/U-2	0	95	(3)	95
Air Defense Competition Fighter		411	(20)	411
MISSILES (3020)(3600)				
Peacekeeper	352	1,418	(21)	2,020
GLCM	7	133	(76)	140
AMRAAM	39	747	(260)	800
AGM-130	44	27	(51)	88
Sparrow (AIM-7M)	0	65	(379)	65
Sidewinder (AIM-9L/M)	0	96	(1710)	96
Maverick	0	581	(4700)	518
HARM	2	493	(2130)	497
SPACE SYSTEMS (3020)(3600)				
DSCS	14	123	(2)	137
Navstar/GPS	89	220	(8)	309

* Does not include weapon system initial spares

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION
TOA

BUDGET ACTIVITY ($B)	FY 1986*	FY 1987*	% Real Growth
Tech Base	.8	.8	+ 1%
Advanced Tech Dev	.7	.8	+13%
Strategic	5.4	7.1	+27%
Tactical	2.7	3.9	+38%
Intel/Comm	2.2	2.5	+ 9%
Def Wide Msn Supt	2.0	2.1	+ 3%
	13.8	17.3	+21%

Strategic ($M)	FY 1986	FY 1987
ICBM Modernization	1442	2117
AFSATCOM/MILSTAR	461	792
SRAM II	34	165
NORAD Cheyenne Mtn Complex	108	74

Tactical ($M)	FY 1986	FY 1987
C-17	373	612
ATF	165	294
Advance Comm	101	33
JTIDS	0	0
AMRAAM	101	39
Joint STARS	0	356

*May not add due to rounding

AIRCRAFT PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Billions)

	FY 1986		FY 1987	
Budget Activity	Qty	Amount	Qty	Amount
Aircraft	333	13.5	359	8.4
Modifications		2.9		3.1
Spares & Repair Parts		3.8		3.5
Spt Equip & Facilities		2.8		4.1
TOTAL		23.0		19.1

AIRCRAFT PROCUREMENT BY WEAPON SYSTEM
(Then Year $ Millions)**

	FY 1986 & Prior		FY 1987		Total Planned Buy (FY 88-91)	
Weapon System	Qty	Amount	Qty	Amount	Qty	Amount
F-15	882	18,784	48	2,027	336	14,370
F-16	1,319	19,303	216	3,843	1,512	29,745
KC-10	52	3,725	8	104		
C-5B	29	5,969	21	1,954		
TR-1/U-2	32	1,269	3	100	3	96
MC-130H	7	382	5	252	9	451

* Does not include B-1 costs prior to FY 1980
** Includes initial spares

MISSILE PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Billions)

	FY 1986		FY 1987	
Budget Activity	Qty	Amount	Qty	Amount
Ballistic Missiles	12	$ 1.8	21	$ 1.5
Other Missiles	6,762	2.3	9,714	3.1
Modifications		.1		.1
Spares & Repair Parts		.4		.3
Other Support		3.7		4.0
TOTAL*		$ 8.3		$ 9.0

* Totals rounded

MISSILE PROCUREMENT BY WEAPON SYSTEM
(Then Year $ Millions)*

	FY 1986 & Prior		FY 1987		TOTAL PLANNED BUY FY 1988-91	
Weapon System	Qty	Amount	Qty	Amount	Qty	Amount
Peacekeeper	54	6,095	21	$1,418	148	$6,164
GLCM	484	2,607	76	133	37	58
AIM-7	5,365	1,032	379	65	523	104
AIM-9	8,350	523	1,710	96	1,567	125
AGM-65	8,280	1,558	4,700	587	28,000	2,118
HARM	2,879	1,077	2,130	505	2,812	645
AGM-130	5	19	51	27	1,175	469
AMRAAM	0	311	260	757	7,583	3,433

*Includes Initial Spares

OTHER PROCUREMENT BY BUDGET ACTIVITY
(Then Year $ Millions)

Budget Activity	FY 1986	FY 1987
Munitions & Associated Equip	$1,200	$1,546
Vehicular Equip	305	332
Electronic & Telecomm Equip	2,494	3,183
Other Base Maint & Spt Equip	4,569	5,839
TOTAL	$8,568	$10,900

OTHER PROCUREMENT MISCELLANEOUS
(Then Year $ Millions)

Program	FY 1986	FY 1987
Munitions & Assoc Eq		
30MM (All Types)	$120	$ 99
GBU-15	85	139
CBU-87 (Combined Effects Munition)	400	567
CBU-89 (TMD/GATOR)	172	194
BSU-49/50 Infl Retarder	41	35
FMU-112/FMU-139 Fuze	42	37
BIGEYE	0	28
Durandal	81	88
Vehicular Equip		
High Mobility Vehicle	15	11
2 1/2 Ton Cargo Truck	0	2
P-19 Fire Truck	24	0
R-9 Fuel Truck	0	0
5 Ton Dump Truck	8	11
Electronics & Telecommunications Equip		
Over-the-Horizon Backscatter Radar	173	188
CSOC	18	76
Automatic Data Processing Equipment	162	136
Range Improvements	90	144
Base Level Data Automation (Phase IV)	48	99
Joint Tactical Comm Program	160	234
Spares	351	423
Tactical Air Control System Improvements	84	64
Defense Support Program	118	100
BMEWS Modernization	71	41
Satellite Control Facility	66	127
Pave Paws	9	120
Other Base Maintenance & Spt Equip		
Chemical Biological Defense Program	81	115
Medical/Dental Equipment	136	144
Mobile Electric Generators	28	27
Defense Dissemination Sys	13	8
Air Base Survivability	20	23
Mobility Equipment	43	61

PERSONNEL END STRENGTHS
(In Thousands)

	FY 1985	FY 1986	FY 1987
Active duty Military	601.5	606.5 (+5.0)	607.2
Civilian			
Direct Hire	250.4	248.6 (-1.8)	250.0
Indirect Hire	13.5	13.1 (- .1)	13.3
Selected Reserve			
AFR	75.2	77.4 (+2.9)	80.5
ANG	109.4	110.9 (+2.6)	115.2

PERSONNEL COSTS*
(Billions of $)

	FY 1985	FY 1986	FY 1987
Active Duty Military	18.0	19.0	19.3
Civilian**	7.1	7.2	7.5
Selected Reserve			
AFR***	.6	.6	.7
ANG	.9	.9	1.1
AF Total	26.6**	27.7	28.3

* Does not include personnel support (medical, training, 50% BOS, recruiting)

** Includes Active, Guard, and Reserve

*** ROTC and Health Professions Scholarship Programs are included

Senator **Warner**. It is a pleasure to sit and listen to you. I was a little late this morning because I wanted to hear some people on early morning television. One of them, a Member of the Senate, said we had not improved substantially or appreciably in our readiness capability in the last 4 years.

I somehow think you may have some different views on that.

General **Gabriel**. Yes, sir, I do.

Senator **Warner**. It came through very clearly with a voice of enthusiasm and expression of appreciation for having the opportunity to serve. I wish you well in your next career.

I expect this will be your last appearance before the Senate.

General **Gabriel**. I expect it will.

Senator **Warner**. We may have to bring you back on this strategic program. We have some major problems in that program this year. In the 7 years I have been here it appears to me to be more complex this year than ever before.

MIDGETMAN

Let both of you, Mr. Secretary first, talk about the Midgetman decision to remove this weight restriction and where would you peg it at this point in time, recognizing you have DSARC coming along in December.

Would you like to lead off, Mr. Secretary?

Mr. **Aldridge**. Yes, sir.

Let me first say it is a pleasure to appear before the committee for the first time in this capacity.

The Air Force strongly supports the President's program for the combination of the Peacekeeper and small ICBM Program. We need the 100 Peacekeeper missiles and we need the small ICBM. It is our opinion that this program is well founded, it is well supported, and we need to keep this program on track.

However, it is our opinion that the weight limitation of 30,000 pounds should be removed. Getting up to around 37,000 pounds for a single warhead missile will give us the additional flexibility needed for the future since none of us can predict exactly what the threat and the penetration requirements will have to be in the 15- or 20-year life of that particular missile.

So, the important flexibility we can design into that system today, will be better for us over the longer term.

DSARC PROGRAM

Senator **Warner**. Let me talk about the December DSARC program.

What is the likelihood of coming back with a different story 60 days after you get into the new fiscal year?

These are questions I have to deal with. I support the President's program. I ask it because I will need direction when I go to the floor and my colleagues ask the very questions I am propounding.

Mr. **Aldridge**. Mr. Chairman, I think if we get into the DSARC process, and I cannot predict how that may turn out, there are legitimate options being looked at for the future, including whether the missile ought to be larger, with more warheads. We are looking at that.

We are responding to those options. If we come back with a recommendation to do anything differently than the way we are pursuing the program today, we will have a very, very good reason that must be unchallengeable.

I do not see that at this point in time. It could happen, but we are pressing on with the program as we have already outlined. We see no reason to deviate from that program at this particular point.

Senator **Warner**. General.

General **Gabriel**. Mr. Chairman, since I am leaving, I can maybe be a little more direct. I do not see it at all, a change in weight of 37,000 to 40,000 pounds.

What we are going to do is look at all the mobility, as well as stationary, options. There is only so much you can do. As the Secretary said, and I agree with him, we want to go to 37,000 pounds to give us a capability to meet the future threat. We want that flexibility.

We do not want to build something that can be countered right away. The change to 37,000 will give us that flexibility and it would not be geared to adding more warheads. That is not our intention.

That will be true as long as nothing happens in the arms control negotiations that changes the way we are looking at this. Mobility is important for survivability and stability. That is the reason the Scowcroft Commission put the Peacekeeper and the small ICBM together.

I do not see that we will come up with any startling changes and we will be there at 37,000 pounds.

Senator **Warner**. We are looking at the technical aspects. We also have to look at the cost. Those who are looking, and I am not one, those who are looking at MIRVing have got the cost problem.

Cost leads me into the next question which we are not at liberty to discuss because of the classification of the material. We received in my subcommittee this week some testimony on the ATB costs. That program will come under the closest scrutiny in the context of what we have to eliminate from the strategic budget.

The threshold issue there is whether or not in view of the B-1B program heading toward the terminal phase, should we place some insurance money in that account now, roughly $200 million, for long-lead items, and go back and reexamine the schedule for the ATB in light of the fact that, first, comparably speaking, it is an unproven technology and, second, we ought to proceed further into the R&D test phase before we go too heavily into our investment.

We look at it from the standpoint of the cost of the unit. Should that program be completed?

Can you provide a general observation, Mr. Secretary?

Mr. **Aldridge**. Yes, sir.

Of course, we strongly support the program currently laid out 100 B-1's and moving on to the ATB. We are pleased at the progress of the program.

Senator **Warner**. Which program? Both?

Mr. **Aldridge**. We do not necessarily see the need for insurance money at this juncture. We believe that we can bring the ATB system in the field at the appropriate time. We are not overly concerned with the cost at this point. We do not see any major cost problems occurring in the program. We are very delighted with the performance we see in all aspects.

I think the program is laid out well and we are going to get on with it. So, the idea of making any adjustments to the program at this time seem unwarranted.

General GABRIEL. I am sure you know from your discussion with General Welch, that we think penetration is most important to our strategic mission.

The lowest cost alternative to give us this capability into the next century is the ATB. Any delays in it, of course, will cause the cost, if you stretch it, to go up some.

Have you seen the bomber study that we are working on? It has been delayed. I think this will answer a lot of your questions.

Senator WARNER. We had your chief of R&D here this past week together with the Assistant Secretary for R&D, Secretary Cooper. We spent approximately 3½ hours. I assume we received what it is you are talking about. I am not characterizing what we received.

Anyway, we may have to ask one or both of you to come back later, formally or informally, to give us some advice because I can tell from the questions of my subcommittee, and we had good attendance, that there is serious concern on both sides of the aisle.

I would not want this day to pass without observing that Secretary Rourke unexpectedly terminated his service to the Department of the Air Force. For the members of this committee, I express their regrets, Secretary Aldridge. He is a man of courage.

You have patiently waited. We have talked about this situation over the years. Now we wish you well.

Mr. ALDRIDGE. Thank you, sir.

Senator WARNER. Mr. Dixon, would you like to ask some questions and then I will return.

Senator DIXON. Thank you, Mr. Chairman.

Mr. Secretary, I was pleased to see that you have increased the production rates on your aircraft, but, frankly, as the ranking member of the Preparedness Subcommittee, which has been engaged in oversight hearings for several weeks, I was disappointed to see the extent of reductions that have been imposed on your munition lines.

Compared to your plans in last year's budget, over half of your munitions lines are cut back. Over the 4 common years between last year's 5-year plan and this year's 5-year plan munitions are reduced by 22 percent which leads me to ask you three questions, if I may.

MUNITIONS VERSUS AIRCRAFT PRIORITY

The first is: What priority do you assign, Mr. Secretary, to munitions compared to new aircraft?

Mr. ALDRIDGE. Senator, I think the position that we take in the Air Force is that when we buy aircraft we want that aircraft when it gets on the line to be combat ready and to have the training, the spare parts, and the munitions necessary to fly.

The first priority is the readiness. First priority is really capability and then readiness and then combat sustainability. We, obviously, have had to take budget cuts over the past years. We tried to do that in a way which we believe is balanced.

You will notice the peacetime spare parts procurement over these past 4 or 5 years has been funded at 100 percent. Then we try to build up those parts and munitions necessary to increase the combat sustainability.

Senator DIXON. It was 100 percent, down to 71 percent, down to 55 percent, and then 58 percent. That is the scale for the next 4 years.

Mr. ALDRIDGE. That is the total spare parts requirement. We break that up into three different parts. One is peacetime operating spares and then what we call WRSK/BLSS and then other war readiness materials. We fund peacetime operating spares at 100 percent in all years.

What we have had to do is cut down the next two components according to the budget pressures we receive. We believe we have provided a balanced approach.

Yes; we would like to have more capability, more munitions to increase our combat capabilities, but the budget pressures do not allow us to do that as quickly as we would like. In our 5-year program we continue to build toward that objective of getting close to 100 percent of the total capacity.

Senator DIXON. That is what I wanted to ask you next.

Does your current 5-year plan meet 100 percent of your wartime requirements for air-to-air and air-to-surface missiles?

Mr. ALDRIDGE. We are working on the 5-year plan right now and I believe it gets up to 100 percent in the 1992 timeframe at the end of the 5-year plan.

TACTICAL FIGHTER WING INCREASE

Senator DIXON. Finally, Mr. Secretary, what are we to make of Air Force priorities when you make a major commitment to grow from 36 to 40 tactical fighter wings, increased production of aircraft, but cut back on spare parts and cut back on munitions.

Mr. ALDRIDGE. Sir, the threat is driving us on all these cases. The requirement that we would like to really get to is well in excess of 40 tactical fighter wings. As you know, the Soviet Union has more than twice that number.

We feel that we can prudently scale that back with support of our allies. By having good combat capability, well-trained crews, we can live with only 40 tactical fighter wings. But we need the capability of these fighter aircraft, first. Then we try to keep them ready in peacetime with the spare parts and then increase as we can to build up the sustainability rates to a point in the future.

Unfortunately, we have had to balance those capabilities. We still need those aircraft and we still need the spare parts and we have had to live with what we can. We would like to build up the 40 tactical fighter wings faster. We have only 36.8 tactical fighter wings today.

We would like to build up our munitions faster, but we have not been able to do that with the budget pressures we have sustained.

Senator DIXON. I only want to say in conclusion I have every bit of sympathy that every other member of this committee shares on the problems you face with our situation with respect to the budget this year and Gramm-Rudman.

I am concerned with what we see in the Preparedness Subcommittee about the spare parts—you mentioned the munitions situation—the next 5 years compared with growth in other phases of all the services' activity.

Mr. ALDRIDGE. When I am sworn in as Secretary of the Air Force, you will be assured that readiness and sustainability will continue to be one of our top priorities.

Senator DIXON. Thank you, Mr. Chairman.

ASAT PROGRAM

Senator THURMOND. General Gabriel, from the military perspective, what priority do you attach to the F-15 launched Asat Program?

General GABRIEL. I attach a very high priority to it. As you know, the Soviets have a capability, but we do not have the operational capability. The F-15 approach to the Asat mission is a good one. We have proven that. We have had one firing and it worked very well.

We just need now to get on with the programs and get the missiles in the field so that we will at least have a match for the other side. We are outgunned right now, like in chemical warfare. We are practically without a credible retaliatory capability while the other side has a very strong one.

The same thing is true in the Asat. If they have a capability, and we must match it until we can eliminate it. Yes; it is most important to us.

Senator THURMOND. Thank you.

Mr. Aldridge, does the Air Force have a plan to respond to the *Challenger* disaster?

When will the 1986 and 1987 funding implications of this plan be made available to the Congress?

Will the financial budget of these actions fall on the Air Force or will cost be borne by all users of space assets?

Mr. ALDRIDGE. Of course, the country received a major setback in our capability to get to space with the *Challenger* loss. We are working with an interagency committee at this point. In fact, the interagency committee meets tomorrow to review the plans for the recovery of the Department of Defense and NASA's space launch capability.

We expect, as a result of that meeting, a position will be given to the President for his decision and approval of the recovery plan and the technique by which we will fund this major increase in our budget for the recovery program.

It is clear substantial funds will be required in fiscal year 1986 as well as fiscal year 1987 to get us on a track of recovery and, hopefully, to a posture for launching that is stronger and more robust than existed before the *Challenger* accident.

We expect, if the decision can be made by the President in the very near future, we will be back to the Congress within a matter of a few weeks with a plan laid out for this recovery.

Senator THURMOND. Thank you very much.

The Senator from Maine, Mr. Cohen.

Senator COHEN. Thank you.

I believe Senator Warner asked several questions I was interested in pursuing.

SMALL ICBM

My understanding is that both witnesses feel with respect to the small ICBM that the weight should not exceed 37,000 pounds?

Mr. ALDRIDGE. That is roughly 37,000; yes, sir.

Senator COHEN. With respect to the launcher, itself, the hardened mobile launcher, do you agree that it should be kept below the weight of 200,000 pounds?

General GABRIEL. The work that we are doing now indicates that. Of course, when we get to the DSARC, we will have all those answers, but it looks that way now; yes.

Senator COHEN. The ICBM modernization report, I think prepared by the Air Force, indicated it should be kept below 200,000 pounds for mobility.

General GABRIEL. That is correct.

Senator COHEN. During our subcommittee hearings General May testified that a three-warhead missile would require a mobile launcher weight of 280,000 or 300,000 pounds.

Do you think he is correct in that?

General GABRIEL. Yes, I do.

Senator COHEN. Again, once you go beyond the 40,000 pound missile weight, mobility begins to degrade.

Do you agree with that?

General GABRIEL. Certainly.

Senator COHEN. The President's budget request for 1987 requests full-scale engineering with the small mobile missile.

I assume you support that?

General GABRIEL. Yes, sir.

Senator COHEN. That is all I have.

Senator THURMOND. Thank you very much.

The distinguished Senator from New Mexico, Mr. Bingaman.

Senator BINGAMAN. Thank you, Mr. Chairman.

AIRCRAFT PRODUCTION RATES

I am sorry I was not here for the testimony. Let me just ask a general question that may have been asked earlier which is on the issue of production rates. We always have this struggle on how you keep the production rates up on aircraft to a reasonable level.

What is your anticipation if we were to wind up with a budget which was pretty much where the Domenici-Chiles proposal is, which I gather is no real growth, but the inflationary increase on defense?

Where would you see that? Is there a way for us to do that and still maintain production rates at a reasonable level on the aircraft that you are interested in?

General GABRIEL. That is for me?

Senator BINGAMAN. Yes, or either of you. Go ahead, General.

General GABRIEL. It depends on how you define "reasonable." We might think it is unreasonable if we are stuck at those lower levels. We would have to make some very hard decisions across the board.

When I gave my preliminary remarks, I did say everything has to be in balance. You cannot just fill up one bucket and wait to fill up another, and then go to the next one. You have to consider strategic, tactical, and airlift. You have to consider all of this. You have to consider sustainability for today. The warlords out there will not let you cut that very much and I agree with that. You have to support what you build and keep it in balance with force structure—you have to balance the new airplanes coming in.

Yes, a reduced budget would have an impact on the production rates. We would not get the most efficient rates. We are kind of used to living with instability unless we can lock into a multiyear contract. The B-1 is one of the best examples of that. The F-16's have had a fairly good track record and probably the Secretary can mention some more.

I do feel that, yes, we would probably have cause to back off some from the best production rates that we would like to bring in.

Mr. ALDRIDGE. I agree with that. In fact, to be a little bit more emphatic, the need for our aircraft will not have gone away. We need the capability. We need the C-17, B-1, ATB, we need the F-16's and F-15's and advanced tactical fighter.

The threat is driving our requirement. That has not gone away. So, if we get cut substantially, assuming the Air Force takes its share of that substantial cut, that the Navy does not have to take it all, the function would be to cut back on the rates of those aircraft.

Unless you can tell us the strategy has changed and there is something we do not have to do any longer—such as, we do not have to modernize our strategic forces, we do not have to increase our tactical forces, we do not have to improve our capabilities in space, or we do not have to have good command and control communications—you have to tell us what you do not want us to do and then maybe we can cancel some programs with those kinds of dollars.

Otherwise, the threat is still there, the need is still there. The only option we have is to cut back on the production rates of those aircraft and get to that capability sometime later in the future.

Senator THURMOND. I have to open the Senate.

We thank you gentlemen for your appearance and your splendid testimony.

Mr. ALDRIDGE. Thank you, Mr. Chairman.

General GABRIEL. Thank you, Mr. Chairman.

Senator THURMOND. I have a few questions for you to answer for the record.

Mr. ALDRIDGE. Yes, sir.

Senator WARNER [presiding]. Go ahead.

SPARES ACCOUNTS

Senator **Bingaman**. One of the criticisms we have of the budget submitted to us is that the production rates have been kept high at the expense of the spares accounts. In fact, we are underfunding what we should as far as spares and spare parts in order to keep these production rates high.

Is that a fair criticism?

Mr. **Aldridge**. We responded to Senator Dixon on that question. Let me summarize the answer.

I challenge the first statement that the production rate is high. We would like to have production rates higher than we have because we would like to build to our 40-tactical fighter wings sooner.

We have had to cut back on production rates of fighters that has already delayed the time when we will achieve 40 tactical fighter wings. By providing a balanced budget, we have had to cut back on other things, such as munitions for those fighters.

I think we have done a pretty good job in balancing the rates at which we achieve our future capabilities and everything has to be adjusted to meet those capabilities. I think we are in balance between the two production rates of fighters and production rates of munitions and spares.

Senator **Bingaman**. If we get into some budgetary crunch in the next several years, how do you propose we make tradeoffs as between fewer F-15's and F-16's versus this ATF?

Is that a tradeoff we need to make a decision on?

Mr. **Aldridge**. We have a set of requirements that drive our future capabilities and the kind of production rates we need. Those requirements are based upon a strategy, a goal, objectives. If you want us to make major cutbacks in our force structure, I think we are going to have to say a consensus has to be achieved. What is it you do not want us to do?

We have a strategic modernization program underway to meet a threat. We have a tactical modernization program underway to meet a threat. We have programs to keep the quality of our personnel high so we can better man and more effectively man the forces we have.

We have airlift programs to be able to move our forces anywhere in the world very rapidly to meet any potential threat. I think you have to say to us that you do not want us to do something and, then, we can go into our budget and find out where to take those cuts, since our requirements are no longer as they were before.

That is the problem we face. We cannot continue to do the same job we were doing before with less money. Something in that job has to be reduced.

Senator **Bingaman**. If the money is going to be less, can you give us any help in telling us where to do the job?

Mr. **Aldridge**. I cannot at this time.

Senator **Bingaman**. It all has to be done, in your view. The question is where do we find the money?

Mr. **Aldridge**. Yes, sir. That is the right statement.

General **Gabriel**. If I could, Senator, I would suggest that you do not entirely mortgage the future just to protect the present or vice versa. It is the balance I was telling you about. You have to concern yourself with your future mission as well as today's mission.

It may be that you will have to work with less than the best in the case of some munitions. But we still have plenty of munitions today, really. Talk to the warlords, they will tell you that. It is just they do not have the preferred munition in some cases.

Senator BINGAMAN. We have this dialog every year, at least for the 3 years I have been here. I guess it seems to me that the military should be in a position to advise on what strategy to pursue, given constrained resources.

I am just asking why we cannot get that kind of direction from the Department of Defense?

General GABRIEL. The only thing I would say would be for God's sake do not cut any more spares in 1987 because we are down at a level that I would be concerned about.

Senator BINGAMAN. That is all I have, Mr. Chairman.

Senator WARNER. A good question to ask.

Senator BINGAMAN. It is part of the dance, Mr. Chairman.

AMRAAM

Senator WARNER. General, one of the most critical and highly visible programs of the Air Force is AMRAAM.

Can you give us a brief update on the test program? Will it meet performance specifications on time?

General GABRIEL. On the AMRAAM we have had six successful test shots. It is a technological success. We do not see any problem with the program now and the Secretary of Defense, as you know, has just certified that he thinks we can bring it in within that cost and within the timeframe we have. So, we think it is on track.

Senator WARNER. Mr. Secretary, do you have anything to add?

Mr. ALDRIDGE. I support that. We did look at the alternatives over the years to see if there was any alternative to AMRAAM to meet the threat we saw. We restructured the program.

I think we now have a program which is a technical success, a program that is on track. We have a cost cap on it. We feel comfortable we can meet the performance and meet the schedule with these cost caps. We are delighted with the current status of the program.

Senator WARNER. General, I tell you I am impressed with that F-111 mission. Regrettably it had to occur under the circumstances for many reasons, but you might wish to comment on that. It may be your departing response today.

Those pilots and aircrews exhibited extraordinary professionalism. The degradation of a certain few aircraft you might clarify for the record. Also the accuracy of that strike.

General GABRIEL. I appreciate the opportunity, Mr. Chairman.

I was fortunate enough to be there when it happened at Mildenhall and Lakenheath.

Senator WARNER. How did you stay out of the cockpit?

General GABRIEL. It was not too easy. I talked to the KC-10 and KC-135 crews. Those were young crews, and we also had women on some of the crews. This is the first time I have seen a combat briefing with a lot of women in the audience. I talked to them and I talked——

Senator WARNER. Do the women fly on tanker operations?

General GABRIEL. We had a lot of tankers, as you know.

Senator WARNER. Did women operate some of those tankers?

General GABRIEL. Yes, we allow women in the KC's as we do the AWACS. We had to go 6,300 miles round trip through Gibraltar, you know it was not an overflight. It was about 14 hours for the longest flight, 13½ to 14 hours for the F-111's. When you fly the bird 7 hours before you drop ordnance, some of those systems will begin to show problems and they did on a few birds.

We did have strict orders that if anything goes wrong, do not drop. We did not want to have collateral damage. That was very strict and some of them had to break off.

I think the one that was hit, of course, went for the water and I think he had to punch his weapons or they were knocked off, but that could be, I think, what caused some of the damage downtown.

To bring all of that off, as you know, we had a lot of aircraft involved, 18 F-111's going in and almost 30 tankers. The KC-10 is the only one that can refuel each other. They were refueling each other most of the way through the route so that at the end of the line the ones that were there were full of gas and it worked very well.

But in terms of the command and control, you have never seen an operation like this where no communications were picked up. It was a complete surprise to some of us as well as to the Libyans, of course.

When we got to the target area, we did have tactical surprise. That was true with the Navy as well as with the Air Force. It was some of the best coordination you will ever see, with the Navy, of course, helping us work the SAM problem as we went in to meet our planned times on target [TOT's].

We do have some tape that you will see later, very good pictures, I think, of the F-111 low level, 400 feet, 540 knots and some of the things they were doing; very professional crews. I could not have been more pleased with their performance.

It was the first time in combat, you know, for them. We only had 3, I guess it was 3 of the combat crews with combat experience, so the other 13, 12 now, are now combat professionals. It was a very reassuring thing.

We do have the quality people, they have the equipment, and they are well trained to do their mission today

Senator WARNER. I hope you can accept that as due to your leadership in the Department of the Air Force.

Thank you very much.

General GABRIEL. Thank you, sir.

Senator WARNER. We have some questions from the members which you may answer for the hearing record.

[Questions for the record with answers supplied follow:]

QUESTIONS SUBMITTED BY SENATOR STROM THURMOND

PRIORITIES

Senator **THURMOND**. General Gabriel, as you are aware, the Senate Budget Committee has recommended a $24 billion reduction from the President's 1987 defense request. If we are forced to sustain that large of a reduction, many programs will have to be stretched out while others will be terminated all together. If faced with the choice of sacrificing one of the following:

Force structure (growth to 40 tactical fighter wings)

Ongoing modernization programs (e.g. F-16, F-15E, AMRAAM, etc.)

Future modernization programs (Advanced Tactical Fighter, C-17, etc.)

Readiness and sustainability (flying hours, spare parts, munitions, etc.) where would the Air Force place its priorities?

General **GABRIEL**. In responding to budget cuts, the Air Force rebalances all programs within the new budget authority to best meet current, mid-range and long-range requirements. This generally requires some sacrifices in all four of the categories mentioned.

We focus on countering Soviet nuclear forces as a first priority, but we fully recognize we must be prepared to meet the threat at lower levels of conflict posed by the Soviets and others. Consequently, we have structured our priorities to deter aggression at all levels—special operations, small and large-scale conventional combat, and theater and strategic nuclear war. We are improving the readiness and sustainability of our general purpose forces, and modernizing and expanding our force structure.

The bottom line is we must simultaneously balance the competing priorities of readiness, sustainability, modernization and force structure expansion to ensure deterrence today and in the future.

SPARE PARTS FUNDING

Senator **THURMOND**. Secretary Aldridge, the funds requested by the administration for Air Force aircraft spares has declined each fiscal year since 1985. For 1985 you requested $5.99 billion, for 1986 you requested $4.9 billion, and this year for 1987 you have requested just less than $3.5 billion. Does this declining trend indicate that you have overcome your spare parts shortfall and are now buying just a sustaining amount of spares? Are your requirements for aircraft spares fully funded in fiscal year 1987? If not, what additional funds are required?

Secretary **ALDRIDGE**. This declining trend does not indicate that shortfalls have been overcome. Instead, it reflects the cumulative effects of reduced appropriations in fiscal year 1986 and lower than projected funding levels in fiscal year 1987. Overall, the replenishment spares account is funded at 56 percent of the total fiscal year 1987 requirement. This supports 100 percent of peacetime readiness and all wartime spares for new force structure. Sustainability shortfalls exist in WRSK/BLSS ($1.5 billion) and the OWRM category ($.5 billion).

T-46

Senator **THURMOND**. Secretary Aldridge, Secretary Rourke recently announced his concurrence with the decision to terminate the T-46 trainer aircraft program. Do you stand by that decision?

Secretary **ALDRIDGE**. Secretary Rourke reaffirmed the earlier decision to cancel further T-46 production because of increasingly stringent fiscal constraints. To this date, these constraints have not eased. I, therefore, stand by his decision.

Senator **THURMOND**. How will the Air Force meet its pilot training requirements without the T-46?

Secretary **ALDRIDGE**. T-46 acquisition was intended to fulfill our future pilot training requirements. However, budgetary growth has been sharply curtailed requiring us to delete T-46 funding from the fiscal year 1987 budget request. Alternatives for the T-37 replacement are under continuing review. In the interim, we will meet programmed pilot training needs using available Air Force resources.

IMPROVED A-7 FOR CLOSE AIR SUPPORT

Senator **THURMOND**. General Gabriel, we are aware of the proposition to upgrade the Air National Guard A-7s for the Close Air Support (CAS) mission. In your personal opinion, does this proposition have merit?

General **GABRIEL**. Yes, the program appears to have merit. A need exists to augment the A-10 in CAS and to provide increased fire power in the Battlefield Air

Interdiction (BAI) arena. An upgraded A-7 has the potential to increase our capability in both CAS and BAI. The upgrade may also be attractive because of its cost effectiveness. The Air Force is evaluating the A-7 upgrade proposal and is structuring a development plan to expedite program initiation, should the results of our evaluation prove favorable.

QUESTIONS SUBMITTED BY SENATOR JOHN GLENN

SICBM TECHNOLOGIES

Senator GLENN. Mr. Aldridge, in your prepared statement you say the Air Force is "continuing evaluation of several technologies for SICBM, with potential application to Peacekeeper follow-on deployments."

Would you please explain to the committee what this evaluation is? It is my understanding that the SICBM Development Program is progressing smoothly toward a full scale development decision later this year.

Secretary ALDRIDGE. The Air Force has considered and accomplished preliminary evaluations of a variety of basing modes. These modes include carry-hard, buried trench, deep-underground basing, hard silos, soft mobile, and the SICBM's baseline hard mobile launcher to support the SICBM full-scale development decision milestone. Some of these technologies may have technical merit while not directly supporting the 1992 IOC for SICBMs, since they may be more appropriate for larger missiles. The SICBM is moving very smoothly as a baseline small single-warhead missile in hard mobile basing. The Air Force is confident that a full-scale development decision can be made later this year.

SINGLE-WARHEAD CONFIGURATION

Senator GLENN. Mr. Aldridge, the congressionally approved SICBM program calls for a single-warhead missile. This configuration was recommended by the Scowcroft Commission and recently endorsed by the Defense Science Board. Does the Air Force support this single-warhead configuration?

Secretary ALDRIDGE. The Air Force supports the recommendations of the Scowcroft Commission and the Defense Science Board Task Force on Small ICBM modernization. Each endorsed the development of a small, mobile ICBM as a far-term complement to the Peacekeeper.

Under direction of the USDR&E however, the Air Force has been tasked to furnish more information on alternatives to the baseline program now under development. This analysis when complete will be used to insure the best combination of basing and missile alternatives for the SICBM DSARC decision later this year.

B-1B PRODUCTION OPTIONS

Senator GLENN. After considerable study, I have come to the conclusion that we should retain the option in fiscal year 1987 to produce additional B-1B bombers. I base this decision on the fact that we have not adequately studied the performance and cost trade-offs of the strategic bomber force and as a hedge against unforeseen technical problems in the ATB Development Program.

In effect—a strategic insurance policy, should it be determined later that procurement of additional B-1's would be the most operationally and cost effective plan.

I would appreciate your comments on preserving the option to produce more B-1's in fiscal year 1987.

General GABRIEL and Secretary ALDRIDGE. The Air Force believes it would be neither economically sound nor militarily prudent to spend money just to retain the option to build additional B-1Bs.

Initial estimates indicate nearly $225 million, in addition to the fiscal year 1987 funding request, would be required to allow B-1B contractors to cover the termination liability associated with the ordering of critical long-lead materials. If not followed up with additional funding in excess of $1 billion for fiscal year 1988, the Air Force would not receive significant deliveries of usable end items. Therefore Air Force investment would be little more than unneeded "term insurance."

The Air Force has studied the performance and cost tradeoffs of the strategic bomber force and concluded the President's Two-Bomber Program is still the optimal approach. As confirmed by the recent DOD Bomber Study, additional B-1Bs beyond the 100 requested are simply not a cost-effective way to address our strategic requirements in the mid-1990s. The 100 B-1Bs will meet our near-term needs and play an important role in the future. The Advanced Technology Bomber (ATB) is essential to our plans for a modernized bomber force. The ATB Program is progressing on schedule—the remote chance of encountering technical problems does not justify payment of large premiums just to retain the option to build additional B-1Bs.

Senator **WARNER**. Gentlemen, thank you for being here. This hearing is now adjourned.

[Whereupon, at 10:07 a.m., the committee adjourned, subject to the call of the Chair.]

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